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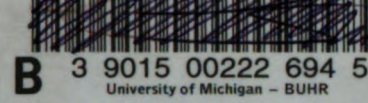
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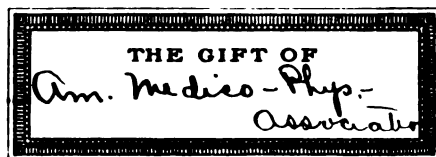
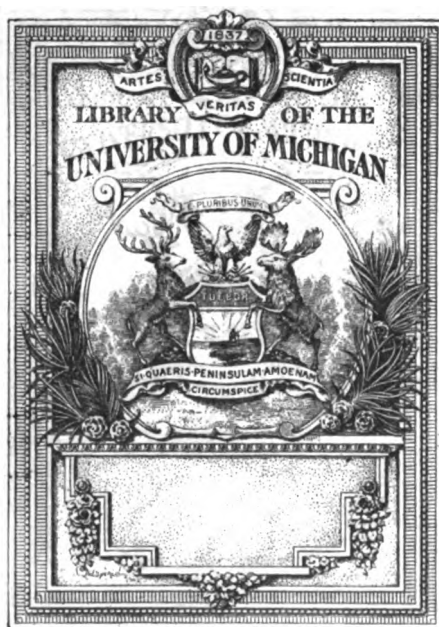
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OF THE

AMERICAN PSYCHOLOGICAL ASSOCIATION

HELD AT MEMPHIS

MORE

1905-1906



PUBLISHED

BY THE AMERICAN PSYCHOLOGICAL ASSOCIATION

1906



*Samuel H. D.*

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1914





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**AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION**  
**March, 1915**

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(This list printed on gummed paper, for mailing purposes, may be obtained from the Secretary. Price 50c.)

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**A**

- 1895 **Abbot, E. Stanley, M. D.**, Assistant Physician McLean Hospital, Waverley, Mass.
- 1907 **Abbot, Florence Hale, M. D.**, Assistant Physician Dr. Mellus' Private Hospital, Newton, Mass.
- 1904 **Adams, Geo. Sheldon, M. D.**, Assistant Superintendent South Dakota Hospital for the Insane, Yankton, S. D.
- 1914 **Adler, Herman M., M. D.**, Chief of Staff Psychopathic Hospital, Boston, Mass.
- 1903 **Allen, Charles Lewis, M. D.** (formerly Pathologist New Jersey State Hospital, Trenton), Physician-in-Charge Psychopathic Hospital, Los Angeles, Cal.
- 1912 **Allen, Fredrick E., M. D.**, Assistant Physician Mendocino State Hospital, Talmage, Cal.
- 1893 **Allen, Henry D., M. D.**, Superintendent Invalids Home, Milledgeville, Ga.
- 1913 **Allen, J. Berton, M. D.**, Assistant Physician Central Islip State Hospital, Central Islip, N. Y. (*Associate.*)
- 1912 **Allison, W. L., M. D.**, Superintendent Arlington Heights Sanitarium, Fort Worth, Tex.
- 1913 **Alsbaugh, Paul J., M. D.**, First Assistant Physician Massillon State Hospital, Massillon, O. (*Associate.*)
- 1913 **Amaden, George S., M. D.**, Assistant Physician Bloomingdale Hospital, White Plains, N. Y. (*Associate.*)
- 1912 **Andrews, Barton F., M. D.**, Mount Morris, N. Y. (*Associate.*)
- 1903 **Andrews, Clayton G., M. D.** (formerly First Assistant Physician Vermont State Hospital, Waterbury, Vt.), Canton, N. Y. (*Associate.*)
- 1894 **Anglin, James V., M. D.**, Medical Superintendent the Provincial Hospital, Fairville, St. John's Co., New Brunswick.
- 1895 **Applegate, Charles F., M. D.**, Medical Superintendent Mt. Pleasant State Hospital, Mt. Pleasant, Ia.
- 1910 **Ard, George P., M. D.**, Assistant Physician State Institution for the Feeble-Minded and Epileptic, Spring City, Pa. (*Associate.*)



- 1903 Armstrong, George G., M.D., Senior Assistant Physician Buffalo State Hospital, Buffalo, N. Y. (*Associate.*)
- 1913 Armstrong, Samuel T., M.D., Physician-in-Charge Hillbourne Club, Katonah, N. Y.
- 1900 Arthur, Daniel H., M.D., Medical Superintendent Gowanda State Homeopathic Hospital, Collins, N. Y.
- 1904 Ahley, Maurice C., M.D., Medical Superintendent Middletown State Homeopathic Hospital, Middletown, N. Y.
- 1910 Athon, W. L., M.D., Marshall, Clark Co., Ill.
- 1906 Atkins, Henry S., M.D., Superintendent City Insane Asylum, St. Louis, Mo.
- 1890 Atwood, Charles E., M.D., 14 East 60th St., New York, N. Y.

## B

- 1888 Babcock, J. W., M.D., Medical Superintendent Waverley Sanitarium, Columbia, S. C.
- 1911 Baber, Armitage, M.D., Superintendent Dayton State Hospital, Dayton, O.
- 1913 Baker, Amos T., M.D., Associate Physician, West Hill, 261st St. & Broadway, New York, N. Y. (*Associate.*)
- 1904 Baker, Benjamin W., M.D., Superintendent New Hampshire School for Feeble-Minded Children, Laconia, N. H.
- 1899 Baker, Jane Rogers, M.D., Private Sanitarium, The Tower House, West Chester, Pa.
- 1896 Baldwin, Henry C., M.D., 126 Commonwealth Ave., Boston, Mass.
- 1909 Baldwin, Louis B., M.D., Superintendent University Hospital, University of Minnesota, Minneapolis, Minn.
- 1898 Ballintine, Eveline P., M.D., Assistant Physician Rochester State Hospital, Rochester, N. Y. (*Associate.*)
- 1896 Bamford, Thos. E., M.D., 304 Delaware St., Syracuse, N. Y.
- 1883 Bancroft, Chas. P., M.D., Medical Superintendent New Hampshire State Hospital, Concord, N. H. (*President, 1908.*)
- 1890 Bannister, Henry M., M.D. (formerly Assistant Physician Illinois Eastern Hospital for the Insane), 828 Judson Ave., Evanston, Ill. (*Honorary.*)
- 1912 Barber, Bruce B., M.D., Assistant Physician Columbus State Hospital, Columbus, O. (*Associate.*)
- 1914 Barber, W. C., M.D., Superintendent Simcoe Hall, Barrie, Ont., Canada.
- 1913 Barlow, Charles A., M.D., Superintendent Second Hospital for Insane, Spencer, W. Va.
- 1912 Barnes, E. C., M.D., Assistant Physician Homewood Sanitarium, Guelph, Ont. (*Associate.*)
- 1909 Barnes, Francis M., Jr., M.D., Assistant Professor Nervous and Mental Diseases, St. Louis University Medical School, 306 Humboldt Bldg., St. Louis, Mo.

- 1914 Barnhardt, Wm. N., M. D., Assistant Physician Central Islip State Hospital, Central Islip, N. Y. (*Associate.*)
- 1898 Barrett, Albert M., M. D., Professor of Psychiatry and Neurology University Hospital, Ann Arbor, Mich.
- 1914 Barry, R. Grant, M. D., Worcester State Hospital, Worcester, Mass. (*Associate.*)
- 1912 Barstow, James M., M. D., St. Bernards Hospital, Council Bluffs, Ia.
- 1912 Bartram, Nell W., M. D., Assistant Physician Kings Park State Hospital, Kings Park, N. Y. (*Associate.*)
- 1914 Baskett, George T., M. D., Assistant Superintendent St. Peter State Hospital, St. Peter, Minn.
- 1913 Bass, T. B., M. D., Superintendent Texas State Epileptic Colony, Abilene, Tex.
- 1909 Beach, Lena A., M. D., Woman Assistant Physician Cherokee State Hospital, Cherokee, Iowa.
- 1900 Becker, W. F., M. D., Consulting Neurologist Milwaukee County Hospital, 604 Goldsmith Building, Milwaukee, Wis.
- 1892 Beemer, Nelson H., M. D., Superintendent Mimico Hospital for the Insane, Toronto, Ont.
- 1902 Beling, Christopher C., M. D. (formerly Assistant Physician New Jersey State Hospital, Morris Plains, N. J.), 109 Clinton Ave., Newark, N. J.
- 1913 Bellinger, Clarence H., M. D., Assistant Physician Binghamton State Hospital, Binghamton, N. Y. (*Associate.*)
- 1914 Bemis, John M., M. D., Superintendent Private Hospital for Insane, Worcester, Mass.
- 1893 Berkley, Henry J., M. D., 1305 Park Ave., Baltimore, Md.
- 1904 Betts, Joseph B., M. D., Assistant Physician Buffalo State Hospital, Buffalo, N. Y. (*Associate.*)
- 1899 Beutler, W. F., M. D., Medical Superintendent Milwaukee Asylum for the Chronic Insane, Wauwatosa, Wis.
- 1913 Beverly, A. Fitzhugh, M. D., Resident Physician Texas School for Defectives, Austin, Tex.
- 1898 Biddle, Thomas, M. D., Superintendent Topeka State Hospital, Topeka, Kansas.
- 1913 Blaisdell, Russell E., M. D., Assistant Physician Kings Park State Hospital, Kings Park, N. Y. (*Associate.*)
- 1914 Blauvelt, John H., M. D., Assistant Physician Matteawan State Hospital, Beacon, N. Y. (*Associate.*)
- 1914 Bles, Victor A., M. D., Assistant Physician Elgin State Hospital, Elgin, Ill. (*Associate.*)
- 1912 Bloss, James E., M. D., Assistant Physician West Virginia Asylum, Huntington, W. Va. (*Associate.*)
- 1886 Blumer, G. Alder, M. D., Medical Superintendent Butler Hospital, Providence, R. I. (*President, 1903.*)
- 1909 Bond, Earl D., M. D., Senior Assistant Physician Pennsylvania Hospital for Insane, Philadelphia, Pa. (*Associate.*)

- 1907 Bond, George F. M., M. D., Proprietor Dr. Bond's House, 960 North Broadway, Yonkers, N. Y.
- 1892 Bondurant, Eugene D., M. D. (formerly Assistant Superintendent Alabama Bryce Hospital), 166 Conti St., Mobile, Ala.
- 1913 Borden, P. G., M. D., Buffalo State Hospital, Buffalo, N. Y. (*Associate.*)
- 1912 Boyd, Wm. A., M. D., 114 W. Franklin St., Baltimore, Md.
- 1904 Bradley, Isabel A., M. D., 221 Ash St., Akron, O.
- 1914 Braunlin, Edgar L., M. D., First Assistant Physician Dayton State Hospital, Dayton, O. (*Associate.*)
- 1910 Brewster, George F., M. D., Senior Assistant Physician State Homeopathic Hospital, Middletown, N. Y. (*Associate.*)
- 1907 Briggs, L. Vernon, M. D., Executive Secretary Massachusetts State Board of Insanity, 64 Beacon St., Boston, Mass.
- 1913 Brill, A. A., M. D., 55 Central Park W., New York, N. Y.
- 1906 Brochu, M. D., M. D., Superintendent Beauport Asylum for Insane, Beauport, Que.
- 1910 Brooks, Swepson J., M. D., Physician-in-Charge St. Vincent's Retreat, Harrison, N. Y.
- 1914 Brothers, J. E., M. D., Assistant Physician State Hospital, Goldsboro, N. C. (*Associate.*)
- 1913 Brown, G. W., M. D., Superintendent Eastern State Hospital, Williamsburg, Va.
- 1914 Brown, Louis R., M. D., Assistant Physician Hospital for Insane, Middletown, Conn. (*Associate.*)
- 1883 Brown, Sanger, M. D., Kenilworth Sanitarium, Kenilworth, Ill.
- 1913 Brown, Sanger, II, M. D., Assistant Physician Bloomingdale Hospital, White Plains, N. Y. (*Associate.*)
- 1912 Brown, Sherman, M. D., Superintendent Kenilworth Sanitarium, Kenilworth, Ill. (*Associate.*)
- 1899 Brown, W. Stuart, M. D., Physician-in-Charge Sanford Hall, Flushing, New York, N. Y.
- 1899 Brownrigg, Albert Edward, M. D., Medical Superintendent Highland Spring Sanatorium, Nashua, N. H.
- 1912 Brundage, Howard M., M. D., 112 E. Broad St., Columbus, O. (*Associate.*)
- 1908 Brunk, Oliver C., M. D., 405 E. Grace St., Richmond, Va.
- 1891 Brush, Edward N., M. D., Physician-in-Chief and Superintendent Sheppard and Enoch Pratt Hospital, Towson, Md. (*Vice-President, 1915.*)
- 1912 Bryan, Wm. A., M. D., Assistant Physician Cherokee State Hospital, Cherokee, Ia. (*Associate.*)
- 1895 Bryant, Percy, M. D. (formerly Medical Superintendent Male Department Manhattan (N. Y.) State Hospital), Bowdoin Park, Rahway, N. J.
- 1891 Buchanan, J. M., M. D., Superintendent East Mississippi Insane Hospital, Meridian, Miss.

- 1912 Buckley, Albert C., M. D., Friends' Asylum, Frankford, Philadelphia, Pa. (*Associate.*)
- 1898 Buckley, James M., D. D., LL. D., Morristown, N. J. (*Honorary.*)
- 1902 Bullard, E. L., M. D. (formerly Superintendent Wisconsin State Hospital for the Insane, Mendota, Wis.), Physician-in-Charge Chestnut Lodge Sanitarium, Rockville, Md.
- 1905 Burdick, Charles M., M. D., Senior Assistant Physician Central Islip State Hospital, Central Islip, L. I., N. Y. (*Associate.*)
- 1913 Burdall, Elijah S., M. D., Assistant Physician Middletown State Homeopathic Hospital, Middletown, N. Y. (*Associate.*)
- 1890 Burgess, T. J. W., M. D., Medical Superintendent Protestant Hospital for the Insane, New P. O. Box 2280, Special Bag, Montreal, Que. (*President, 1905.*)
- 1909 Burlingame, C. C., M. D., Assistant Superintendent Fergus Falls State Hospital, Fergus Falls, Minn. (*Associate.*)
- 1894 Burnet, Anne, M. D., 513 La Salle St., Wausau, Wis.
- 1913 Burnett, S. Grover, M. D., Medical Superintendent The Burnett Sanitarium, 3100 Euclid Ave., Kansas City, Mo.
- 1914 Burns, Geoffrey C. H., M. D., Senior Assistant Physician Central Islip State Hospital, Central Islip, N. Y. (*Associate.*)
- 1890 Burr, C. B., M. D., Medical Director Oak Grove Hospital, Flint, Mich. (*President, 1906.*)
- 1907 Burr, Chas. W., M. D., Professor of Mental Diseases University of Pennsylvania, 1918 Spruce St., Philadelphia, Pa.
- 1901 Busey, A. P., M. D., Superintendent Colorado State Home and Training School for Mental Defectives, Ridge, Colo.
- 1911 Busse, Edward P., M. D., Medical Superintendent Southeastern Hospital for Insane, Cragmont, Madison, Ind.
- 1910 Butterfield, George K., M. D., State Colony, North Grafton, Mass. (*Associate.*)

## C

- 1902 Calder, Daniel H., M. D., Superintendent State Mental Hospital, Provo City, Utah.
- 1907 Callaway, L. H., M. D. (formerly Superintendent State Hospital No. 3), 525 West Arch St., Nevada, Mo.
- 1907 Campbell, Earl H., M. D., Superintendent Upper Peninsula Hospital for the Insane, Newberry, Mich.
- 1899 Campbell, George B., M. D., First Assistant Physician Utica State Hospital, Utica, N. Y.
- 1885 Campbell, Michael, M. D., Medical Superintendent Eastern Hospital for the Insane, Bearden, Tenn.
- 1914 Canavan, Myrtelle M., M. D., Pathologist Boston State Hospital, Boston, Mass. (*Associate.*)
- 1901 Caples, Byron M., M. D., Medical Superintendent Waukesha Springs Sanitarium, Waukesha, Wis.

- 1909 Capron, Arthur J., M. D., Physician-in-Charge Glenmary Sanitarium, Owego, N.-Y.
- 1914 Carey, Charles J., M. D., Superintendent Eastern Shore State Hospital, Cambridge, Md.
- 1905 Carey, Harris May, M. D., P. O. Box 83, Odessa, Delaware.
- 1903 Carlisle, Chester Lee, M. D., Senior Assistant Physician Kings Park State Hospital, Kings Park, N. Y. (*Associate.*)
- 1911 Carpenter, Howard P., M. D., Assistant Physician Hudson River State Hospital, Poughkeepsie, N. Y. (*Associate.*)
- 1906 Carriel, Henry B., M. D., Superintendent Jacksonville State Hospital, Jacksonville, Ill.
- 1911 Carroll, Robert S., M. D., Medical Director Highland Hospital, Asheville, N. C.
- 1913 Casamajor, Louis, M. D., 342 W. 56th St., New York, N. Y.
- 1909 Cavanaugh, William J., M. D., Senior Assistant Physician Hudson River State Hospital, Poughkeepsie, N. Y. (*Associate.*)
- 1892 Chaddock, Chas. G., M. D., 3705 Delmar Boulevard, St. Louis, Mo.
- 1896 Chagnon, E. Philippe, M. D., Physician to Notre Dame Hospital, 201 Esplanade Ave., Montreal, Que.
- 1880 Channing, Walter, M. D., Channing Sanitarium, Brookline, Mass.
- 1867 Chapin, John B., M. D. (formerly Physician and Superintendent Pennsylvania Hospital for the Insane), (Retired), 244 Main St., Canandaigua, N. Y. (*President, 1889.*)
- 1912 Chapman, Ross McC., M. D., Assistant Physician Binghamton State Hospital, Binghamton, N. Y. (*Associate.*)
- 1883 Chase, Robert H., M. D., Medical Superintendent Friends' Asylum, Frankford, Philadelphia, Pa.
- 1914 Cheney, Clarence O., M. D., Assistant Physician Manhattan State Hospital, Ward's Island, N. Y.
- 1912 Child, Howard T., M. D., Pathologist Kankakee State Hospital, Kankakee, Ill. (*Associate.*)
- 1895 Chilgren, G. A., M. D., 406½ Jefferson St., Burlington, Iowa.
- 1892 Christian, Edmund A., M. D., Medical Superintendent Pontiac State Hospital, Pontiac, Mich.
- 1913 Christian, Frank L., M. D., Assistant Superintendent New York State Reformatory, Elmira, N. Y.
- 1907 Clark, Charles H., M. D., Superintendent Cleveland State Hospital, Cleveland, Ohio.
- 1910 Clark, Fred P., M. D., Superintendent State Hospital, Stockton, Cal.
- 1898 Clark, Joseph Clement, M. D., Superintendent Springfield State Hospital, Sykesville, Md.
- 1906 Clark, L. Pierce, M. D., Consulting Neurologist Central Islip State Hospital, 84 East 56th St., New York, N. Y.
- 1885 Clarke, Chas. K., M. D., Medical Superintendent Toronto General Hospital, Toronto, Ont.
- 1904 Clarke, Homer E., M. D., Assistant Medical Director, Oak Grove Hospital, Flint, Mich. (*Associate.*)

- 1881 Clouston, Sir Thos. S., M. D., F. R. C. P. E. of LL. D., Edin. and Aber.  
(formerly Physician-Superintendent Edinburgh Royal Asylum),  
26 Heriot Row, Edinburgh, Scotland. (*Honorary.*)
- 1898 Coe, Henry W., M. D., Medical Director Crystal Springs, 516 Selling  
Building, Portland, Ore.
- 1905 Coggins, Jesse C., M. D., Medical Director The Laurel Sanitarium,  
Laurel, Md.
- 1913 Cohn, Eugen, M. D., Assistant Superintendent Kankakee State Hos-  
pital, Kankakee, Ill.
- 1913 Cohoon, E. H., M. D., Assistant Physician, State Hospital for Insane,  
Howard, R. I. (*Associate.*)
- 1901 Coleburn, Arthur B., M. D., Assistant Physician Connecticut Hospital  
for the Insane, Middletown, Conn. (*Associate.*)
- 1906 Coles, William W., M. D., Keene, N. H.
- 1909 Collier, G. Kirby, M. D., Assistant Physician Craig Colony for Epi-  
leptics, Sonycia, N. Y.
- 1912 Colmon, A. T., M. D., Assistant Physician St. Lawrence State Hos-  
pital, Ogdensburg, N. Y. (*Associate.*)
- 1894 Cook, R. Harvey, M. D., Physician-in-Chief Oxford Retreat, Oxford,  
Ohio.
- 1894 Cook, Robert G., M. D., Resident Physician Brigham Hall, Canandaig-  
ua, N. Y.
- 1892 Copp, Owen, M. D., Physician and Superintendent Pennsylvania Hos-  
pital for the Insane, Philadelphia, Pa.
- 1912 Corcoran, David, M. D., Assistant Physician Central Islip State Hos-  
pital, Central Islip, N. Y. (*Associate.*)
- 1914 Corey, Herman W., M. D., Assistant Physician St. Peter State Hos-  
pital, St. Peter, Minn. (*Associate.*)
- 1903 Coriat, Isador H., M. D., 416 Marlborough St., Boston, Mass.
- 1908 Cornell, William B., M. D., 401 Garrett Bldg., Baltimore, Md.
- 1902 Cort, Paul Lange, M. D., 144 West State St., Trenton, N. J. (*Asso-  
ciate.*)
- 1902 Cossitt, H. Austin, M. D., 146 West 70th St., New York, N. Y. (*Asso-  
ciate.*)
- 1903 Cotton, Henry A., M. D., Medical Director New Jersey State Hospital,  
Trenton, N. J.
- 1881 Cowles, Edward, M. D. (formerly Medical Superintendent McLean  
Hospital, Waverley), Plymouth, Mass. (*President, 1895.*)
- 1914 Cozad, H. Irving, M. D., Clinical Director Fair Oaks Villa, Cuyahoga  
Falls, O. (*Associate.*)
- 1912 Craig, Anna, M. D., Assistant Physician Kings Park State Hospital,  
Kings Park, N. Y. (*Associate.*)
- 1908 Crittenden, Samuel W., M. D., Assistant Superintendent Boston State  
Hospital, Dorchester Centre, Mass. (*Associate.*)
- 1913 Crooks, Wm. A., M. D., Superintendent Watertown State Hospital,  
Watertown, Ill.
- 1913 Cross, Albert M., M. D., Assistant Physician The Southern Indiana  
Hospital for the Insane, Evansville, Ind. (*Associate.*)

- 1892 Crumbacker, W. P., M. D., Medical Superintendent Independence State Hospital, Independence, Ia.  
 1913 Curry, Marcus A., M. D., Assistant Physician New Jersey State Hospital, Morris Plains, N. J. (*Associate.*)  
 1913 Curtia, Barbara, M. D., Hudson River State Hospital, Poughkeepsie, N. Y. (*Associate.*)

## D

- 1914 Darling, Ira A., M. D., Assistant Physician State Hospital, Warren, Pa. (*Associate.*)  
 1899 Darling, W. H., M. D., Superintendent The Sanatorium, Hudson, Wis. (*Associate.*)  
 1902 Darnall, Rolland F., M. D., Clinical Director and Assistant Superintendent State Hospital for Nervous Diseases, Little Rock, Ark.  
 1913 Davies, George W., M. D., Essex County Hospital for Insane, Cedar Grove, N. J. (*Associate.*)  
 1909 De Jarnette, J. S., M. D., Medical Superintendent Western State Hospital, Staunton, Va.  
 1899 Delacroix, Arthur C., M. D., Douglas, Alaska. (*Associate.*)  
 1913 DeLaHoyde, T. Grover, M. D., Assistant Physician Hudson River State Hospital, Poughkeepsie, N. Y. (*Associate.*)  
 1912 Deming, Ralph, M. D., Mercer, N. Dak. (*Associate.*)  
 1909 Dennes, Blanche, M. D., Assistant Physician Hudson River State Hospital, Poughkeepsie, N. Y. (*Associate.*)  
 1912 Devlin, Francis E., M. D., Assistant Superintendent Hospital St. Jean de Dieu, Gamelin, Que. (*Associate.*)  
 1911 De Weese, Cornelius, M. D., Medical Director The Laurel Sanitarium, Laurel, Md.  
 1890 Dewey, Chas. G., M. D., Examining Physician Registration Department City of Boston, 44 Alban St., Dorchester, Boston, Mass.  
 1892 Dewey, Richard, M. D., Physician-in-Charge Milwaukee Sanitarium, Wauwatosa, Wis. (*President, 1896.*) Chicago office, 34 Washington St., Venetian Building, Wednesdays, 11.30 a. m. to 1 p. m.  
 1913 Dexter, Roger, M. D., Assistant Physician Dannemora State Hospital, Dannemora, N. Y. (*Associate.*)  
 1900 Diefendorf, Allen Ross, M. D., 29 College St., New Haven, Conn.  
 1914 Disbrow, G. Ward, M. D., Assistant Physician Springfield State Hospital, Sykesville, Md. (*Associate.*)  
 1912 Dehson, Wm. M., M. D., Boston State Hospital, Dorchester Centre, Mass. (*Associate.*)  
 1912 Dodge, Percy L., M. D., Assistant Physician Hudson River State Hospital, Poughkeepsie, N. Y. (*Associate.*)  
 1907 Doherty, Charles E., M. D., Superintendent Public Hospital for Insane, New Westminster, B. C., Canada.  
 1892 Dold, William E., M. D., Physician-in-Charge River Crest Sanitarium, Astoria, L. I., N. Y. 616 Madison Ave., New York City.

- 1908 Dolloff, Charles H., M. D., First Assistant Physician New Hampshire State Hospital, Concord, N. H. (*Associate.*)
- 1908 Donahoe, George, M. D., Superintendent Cherokee State Hospital, Cherokee, Iowa.
- 1902 Douglas, A. E., M. D., Superintendent Central Hospital for the Insane, Nashville, Tenn.
- 1907 Downing, Dana Fletcher, M. D., Warren, Ill.
- 1892 Drewry, William F., M. D., Medical Superintendent Central State Hospital, Petersburg, Va. (*President, 1910.*)
- 1914 Dunham, Sydney A., M. D., Resident Physician and Proprietor Dr. Dunham's Sanitarium, 1392 Amherst St., Buffalo, N. Y.
- 1913 Dunning, Ralph H., M. D., 2020 James St., Eastwood, N. Y. (*Associate.*)
- 1896 Dunton, Wm. Rush, Jr., M. D., First Assistant Physician Sheppard and Enoch Pratt Hospital, Towson, Md.
- 1912 Durgin, Delmer D., M. D., Assistant Physician Kings Park State Hospital, Kings Park, N. Y. (*Associate.*)
- 1899 Durham, Albert, M. D., Piedmont Bldg., Charlotte, N. C. (*Associate.*)

## E

- 1909 Earl, H. D., M. D., First Assistant Physician North Dakota State Hospital, Jamestown, N. D.
- 1912 Eastman, Frederic C., M. D., 1268 Bergen St., Brooklyn, N. Y.
- 1912 Eaton, Richard G., M. D., Assistant Physician River Crest Sanitarium, Astoria, L. I., N. Y. (*Associate.*)
- 1914 Eckel, John L., M. D., 145 Allen St., Buffalo, N. Y.
- 1896 Edenharter, Geo. F., M. D., Medical Superintendent Central Indiana Hospital for the Insane, Indianapolis, Ind.
- 1893 Edgerly, J. Frank, M. D., 1 Mt. Vernon Terrace, Newtonville, Mass.
- 1894 Edwards, John B., M. D. (formerly Medical Superintendent Wisconsin State Hospital), 311 Goldsmith Building, Milwaukee, Wis.
- 1913 Eirley, Clara, M. D., State Hospital, St. Peter, Minn. (*Associate.*)
- 1899 Elliott, Hiram, M. D. (formerly Superintendent Marshall Sanitarium), 58 Willett St., Albany, N. Y.
- 1897 Elliott, Robert M., M. D., Medical Superintendent Willard State Hospital, Willard, N. Y.
- 1913 Emerick, E. J., M. D., Superintendent Institution for Feeble-Minded, Columbus, O.
- 1913 Emerson, Ernest B., M. D., Medical Director State Hospital, Bridgewater, Mass.
- 1892 Emerson, Justin E., M. D., Attending Physician St. Joseph's Retreat, Dearborn, Mich.; Attending Neurologist Harper Hospital and Children's Free Hospital, Detroit, 128 Henry St., Detroit, Mich.
- 1909 English, W. M., M. D., Medical Superintendent Hospital for Insane, Hamilton, Ont.



- 1893 Evans, B. D., M. D., Medical Director New Jersey State Hospital, Morris Plains, N. J.
- 1914 Everts, Arrah B., M. D., Assistant Physician Government Hospital for Insane, Washington, D. C. (*Associate.*)
- 1908 Everett, Edward A., M. D., Senior Assistant Physician Norwich State Hospital, Norwich, Conn.
- 1912 Ewing, Halle Laura, M. D., Assistant Physician Nebraska Hospital for Insane, Lincoln, Neb. (*Associate.*)
- 1892 Eyman, H. C., M. D., Medical Superintendent Massillon State Hospital, Massillon, Ohio.

## F

- 1907 Faison, W. W., M. D., Superintendent State Hospital, Goldsboro, N. C.
- 1914 Faria, George T., M. D., Assistant Physician Pennsylvania Hospital for Insane, Philadelphia, Pa. (*Associate.*)
- 1912 Faxon, Dora W., M. D., Taunton State Hospital, Taunton, Mass. (*Associate.*)
- 1898 Felty, John C., M. D., Assistant Physician New Jersey State Hospital, Trenton, N. J. (*Associate.*)
- 1907 Fernald, Guy G., M. D., Physician Massachusetts Reformatory, Concord Junction, Mass.
- 1895 Fernald, Walter E., M. D., Superintendent Massachusetts School for the Feeble-Minded, Waverley, Mass.
- 1909 Ferris, Albert Warren, M. D., State Reservation Commission, Saratoga Springs, N. Y.
- 1913 Finlayson, Alan D., M. D., Assistant Physician Warren State Hospital, Warren, Pa. (*Associate.*)
- 1912 Fish, Drury L., M. D., Kankakee State Hospital, Hospital, Ill. (*Associate.*)
- 1907 Fisher, E. Moore, M. D., Assistant Physician New Jersey State Hospital, Morris Plains, N. J. (*Associate.*)
- Fisher, Theodore W., M. D. (formerly Medical Superintendent Boston State Hospital), Boston, Mass.
- 1892 Fitzgerald, John F., M. D., General Medical Superintendent King's County Hospital, Brooklyn, N. Y.
- 1907 Fitzgerald, John G., M. D., Associate Professor Bacteriology University of California, Berkeley, Cal. (*Associate.*)
- 1912 Fletcher, Christopher, M. D., Assistant Physician Buffalo State Hospital, Buffalo, N. Y. (*Associate.*)
- 1899 Flint, Austin, M. D., Consulting Physician Manhattan State Hospital, 118 E. 19th St., New York, N. Y.
- 1900 Flood, Everett, M. D., Superintendent Monson State Hospital, Palmer, Mass.
- 1912 Foley, Edward A., M. D., Assistant Physician Jacksonville State Hospital, Jacksonville, Ill. (*Associate.*)
- 1911 Fordyce, O. O., M. D., Superintendent Athens State Hospital, Athens, O.

- 1913 Forster, James M., M. D., Medical Superintendent Hospital for Insane, Toronto, Ont.
- 1908 Franz, Shepherd I., A. B., Ph. D., Psychologist and Scientific Director, Government Hospital for Insane, Washington, D. C. (*Honorary.*)
- 1913 Freeman, George H., M. D., Superintendent State Hospital for Inebriates, Willmar, Minn.
- 1897 French, Edward, M. D., Superintendent Medfield State Asylum, Harding, Mass.
- 1914 Frink, Horace W., M. D., 1 W. 83d St., New York, N. Y.
- 1899 Frost, Henry P., M. D., Superintendent Boston State Hospital, Dorchester Centre, Mass.
- 1913 Fuller, Daniel H., M. D., Pennsylvania Hospital for Insane, Philadelphia, Pa.
- 1902 Fuller, Solomon Carter, M. D., Pathologist Westborough State Hospital, Westborough, Mass. (*Associate.*)
- 1908 Funkhouser, Edgar B., M. D., Second Assistant Physician New Jersey State Hospital, Trenton, N. J. (*Associate.*)
- 1914 Furman, Isaac J., M. D., Assistant Physician Kings Park State Hospital, Kings Park, N. Y. (*Associate.*)

## G

- 1911 Gale, George Bancroft, M. D., Medical Director Bancroft Health Resort, Butler, N. J.
- 1913 Gardner, Wm. E., M. D., Superintendent Central State Hospital, Lakeland, Ky.
- 1900 Garlick, J. H., M. D., Assistant Physician Western State Hospital, Staunton, Va. (*Associate.*)
- 1905 Garrett, R. Edward, M. D., Assistant Physician Maryland Hospital for the Insane, Catonsville, Md. (*Associate.*)
- 1909 George, John Cecil, M. D., Orchard Springs Sanitarium, Dayton, Ohio. (*Associate.*)
- 1912 Gearegen, Wm. E., M. D., Resident Physician Belle Mead Farm Colony and Sanatorium, Belle Mead, N. J.
- 1914 Gibson, Horatio G., Jr., M. D., Assistant Physician Central Islip State Hospital, Central Islip, N. Y. (*Associate.*)
- 1909 Gillespie, Edward, M. D., Senior Assistant Physician Binghamton State Hospital, Binghamton, N. Y. (*Associate.*)
- 1907 Gillespie, Robert L., M. D., Medical Director Crystal Springs Sanitarium, Portland, Ore.
- 1912 Gilliam, Charles F., M. D., Superintendent Columbus State Hospital, Columbus, O.
- 1913 Ginsburg, Samuel, M. D., Assistant Physician St. Lawrence State Hospital, Ogdensburg, N. Y. (*Associate.*)
- 1893 Givens, A. J., M. D., Proprietor Dr. Givens' Sanitarium, Stamford, Conn.

- 1895 Givens, John W., M. D., Medical Superintendent Northern Idaho Insane Asylum, Orofino, Idaho.
- 1910 Glascock, Alfred, M. D., Senior Assistant Physician Government Hospital for the Insane, Washington, D. C. (*Associate.*)
- 1914 Glueck, Bernard, M. D., Senior Assistant Physician Government Hospital for Insane, Washington, D. C. (*Associate.*)
- 1903 Goodwill, V. L., M. D., and C. M., Medical Superintendent Falconwood Hospital for the Insane, Charlottetown, P. E. I.
- 1912 Gordon, Alfred, M. D., 1812 Spruce St., Philadelphia, Pa.
- 1912 Gorrill, George W., M. D., First Assistant Physician Buffalo State Hospital, Buffalo, N. Y. (*Associate.*)
- 1906 Gorst, Charles, M. D., Superintendent State Hospital for the Insane, Mendota, Wis.
- 1894 Gorton, Elliot, M. D., Fair Oaks Sanatorium, 26 New England Ave., Summit, N. J.
- 1898 Goss, Arthur V., M. D., Superintendent Taunton State Hospital, Taunton, Mass.
- 1912 Goss, H. L., M. D., Assistant Physician Osawatomie State Hospital, Osawatomie, Kans. (*Associate.*)
- 1886 Granger, Wm. D., M. D., Vernon House, Bronxville, N. Y.
- 1905 Green, Edward M., M. D., Clinical Director Georgia State Sanitarium, Milledgeville, Ga.
- 1909 Greene, Edward C., M. D., Northampton State Hospital, Northampton, Mass. (*Associate.*)
- 1910 Greene, James L., M. D., Superintendent State Hospital for Nervous Diseases, Little Rock, Ark.
- 1914 Gregg, Donald, M. D., Resident Physician Channing Sanitarium, Brookline, Mass.
- 1908 Gregory, Menas S., M. D., Resident Alienist Bellevue Hospital, New York, N. Y.
- 1913 Griffin, D. W., M. D., Superintendent Oklahoma Hospital for Insane, Norman, Okla.
- 1913 Groll, Edward W., M. D., Assistant Physician Binghamton State Hospital, Binghamton, N. Y. (*Associate.*)
- 1913 Groom, Wirt C., M. D., Assistant Physician Willard State Hospital, Willard, N. Y. (*Associate.*)
- 1914 Grover, Milton M., M. D., Central Islip, State Hospital, Central Islip, N. Y. (*Associate.*)
- 1910 Guibord, Alberta S. B., M. D., Laboratory of Social Hygiene, Bedford Hills, N. Y.
- 1900 Gundry, Alfred T., M. D., Medical Director The Gundry Sanitarium, Catonsville, Md.
- 1908 Gundry, Lewis H., M. D., Superintendent Relay Sanitarium, Relay, Baltimore Co., Md.

- 1892 Gundry, Richard F., M.D., Medical Director and Proprietor the Richard Gundry Home, Harlem Lodge, Catonsville, Md.  
 1899 Guthrie, L. V., M.D., Superintendent West Virginia Asylum, Huntington, W. Va.

## H

- 1914 Haberman, J. Victor, M.D., Instructor in Neurology and Therapy P. and S., Columbia University, New York, N. Y.  
 1912 Haight, Julius E., M.D., Assistant Physician Utica State Hospital, Utica, N. Y. (*Associate.*)  
 1891 Hall, G. Stanley, Ph.D., LL.D., President Clark University, Worcester, Mass. (*Honorary.*)  
 1886 Hall, Henry C., M.D., Assistant Physician Butler Hospital, Providence, R. I. (*Associate.*)  
 1911 Halsey, Luther M., M.D., Chairman Medical Committee, New Jersey State Hospital, Williamstown, N. J.  
 1899 Hamilton, Arthur S., M.D., Instructor in Nervous and Mental Diseases and Neuropathology, College of Medicine and Surgery, University of Minnesota, 513 Pillsbury Building, Minneapolis, Minn.  
 1914 Hamilton, Claude D., M.D., Assistant Physician Springfield State Hospital, Sykesville, Md. (*Associate.*)  
 1907 Hamilton, Gilbert V., M.D., Montecito, Cal.  
 1907 Hamilton, Samuel W., M.D., Senior Assistant Physician Utica State Hospital, Utica, N. Y.  
 1912 Hammers, James S., M.D., Assistant Physician State Hospital, Danville, Pa. (*Associate.*)  
 1908 Hammond, Frederick S., M.D., Assistant Physician and Pathologist, New Jersey State Hospital, Trenton, N. J. (*Associate.*)  
 1908 Hammond, Graeme M., M.D., Professor of Mental Diseases, 60 West 56th St., New York, N. Y.  
 1893 Hancker, W. H., M.D., Medical Superintendent Delaware State Hospital, Farnhurst, Del.  
 1906 Hanes, Edward L., M.D., 748 Main St., E., Rochester, N. Y.  
 1913 Hanson, Wm. T., M.D., State Board of Insanity, Arlington, Mass. (*Associate.*)  
 1904 Harding, George T., Jr., M.D. (Neurologist to Grant Hospital, St. Anthony's Hospital and St. Clair Hospital), 318 E. State St., Columbus, O.  
 1891 Harmon, F. W., M.D., Medical Superintendent Longview Hospital, Cincinnati, Ohio.  
 1894 Harrington, Arthur H., M.D., Superintendent State Hospital for Insane, Howard, R. I.  
 1913 Harrington, John J., M.D., 504 W. 112th St., New York, N. Y.  
 1913 Harris, George F., M.D., Assistant Physician Buffalo State Hospital, Buffalo, N. Y. (*Associate.*)  
 1899 Harris, Isham G., M.D., Superintendent Mohansic State Hospital, Yorktown, N. Y.

- 1888 Harrison, Daniel A., M. D., Breezehurst Terrace, Whitestone, L. I., N. Y.
- 1913 Hasking, Arthur P., M. D., Official Examiner of Indigent Insane, Hudson Co., 318 Montgomery St., Jersey City, N. J.
- 1914 Hassall, James C., M. D., Assistant Physician Government Hospital for Insane, Washington, D. C. (*Associate.*)
- 1910 Hatch, F. W., M. D., General Superintendent of California State Hospitals, Sacramento, Cal.
- 1913 Hatcher, George E., M. D., First Assistant Physician Central Hospital for the Insane, near Nashville, Tenn. (*Associate.*)
- 1894 Hattie, W. H., M. D., Inspector of Humane and Penal Institutions, Halifax, N. S.
- 1899 Haviland, C. Floyd, M. D., First Assistant Physician Kings Park State Hospital, Kings Park, N. Y.
- 1914 Haviland, Walter C., M. D., 11 Elm St., Worcester, Mass.
- 1908 Hawke, W. W., M. D., "The Eyrie," Clifton Heights, Delaware Co., Pa.
- 1910 Hedlin, Carl J., M. D., Superintendent Maine School for Feeble-Minded, W. Pownal, Me.
- 1912 Helmer, Ross D., M. D., Assistant Physician Hudson River State Hospital, Poughkeepsie, N. Y. (*Associate.*)
- 1913 Henderson, Estelle H., M. D., Southwestern State Hospital, Marion, Va. (*Associate.*)
- 1912 Henry, Hugh Carter, M. D., First Assistant Physician Central State Hospital, Petersburg, Va. (*Associate.*)
- 1911 Henschel, Louis K., M. D., Senior Assistant Physician and Pathologist New Jersey State Hospital, Morris Plains, N. J. (*Associate.*)
- 1911 Herring, Arthur P., M. D., Secretary State Lunacy Commission, 330 North Charles St., Baltimore, Md.
- 1894 Heyman, Marcus B., M. D., First Assistant Physician Central Islip State Hospital, Central Islip, L. I., N. Y.
- 1911 Hickling, D. Percy, M. D., Visiting Physician Washington Asylum and Jail, 1304 Rhode Island Ave., N. W., Washington, D. C.
- 1883 Hill, Chas. G., M. D., Physician-in-Chief Mt. Hope Retreat, Baltimore, Md. (*President, 1907.*)
- 1883 Hill, Gershom H., M. D., Superintendent "The Retreat," Des Moines, Ia.
- 1899 Hill, S. S., M. D., Superintendent State Asylum for the Chronic Insane, Wernersville, Pa.
- 1897 Hills, Frederick L., M. D., Superintendent Bangor State Hospital, Bangor, Me.
- 1886 Hinckley, L. S., M. D. (formerly Medical Superintendent Essex County Hospital), 182 Clinton Ave., Newark, N. J.

- 1913 Hinton, Ralph T., M. D., Superintendent Elgin State Hospital, Elgin, Ill.
- 1900 Hirsch, Wm., M. D., Neurologist to the German Poliklinik, 52 E. Sixty-fourth St., New York, N. Y.
- 1900 Hitchcock, Chas. W., M. D., Attending Neurologist Harper Hospital, 270 Woodward Ave., Detroit, Mich.
- 1903 Hobbs, Alfred T., M. D., Superintendent Homewood Sanitarium, Guelph, Ont.
- 1895 Hoch, August, M. D., Director Psychiatric Institute, Ward's Island, New York, N. Y.
- 1904 Hoch, Theodore A., M. D., Assistant Physician McLean Hospital, Waverley, Mass. (*Associate.*)
- 1914 Hodakin, Morgan B., M. D., Assistant Physician Monson State Hospital, Palmer, Mass. (*Associate.*)
- 1914 Hoffman, Harry F., M. D., Assistant Superintendent Homeopathic State Hospital, Allentown, Pa. (*Associate.*)
- 1900 Holley, Erving, M. D., Assistant Physician Long Island State Hospital, Brooklyn, N. Y. (*Associate.*)
- 1913 Horaman, Hiram L., M. D., Assistant Physician Worcester State Asylum, Worcester, Mass. (*Associate.*)
- 1913 Hotchkiss, W. M., M. D., Superintendent State Hospital for Insane, Jamestown, N. Dak.
- 1894 Houston, John A., M. D., Medical Superintendent Northampton State Hospital, Northampton, Mass.
- 1894 Howard, A. B., M. D. (formerly Medical Superintendent Cleveland State Hospital), 736 Rose Building, Cleveland, Ohio.
- 1888 Howard, Eugene H., M. D., Medical Superintendent Rochester State Hospital, Rochester, N. Y.
- 1894 Howard, Herbert B., M. D., Superintendent Peter Brent Brigham Hospital, 697 Huntington Ave., Boston, Mass.
- 1912 Hubbard, O. S., M. D., Assistant Superintendent Kansas State Hospital for Epileptics, Parsons, Kans. (*Associate.*)
- 1867 Hughes, Chas. H., M. D., 3858 West Pine Boulevard, St. Louis, Mo.
- 1907 Hummer, Henry R., M. D., Superintendent Asylum for Insane Indians, Canton, South Dakota.
- 1899 Hun, Henry, M. D., Albany, N. Y. (*Honorary.*)
- 1894 Hurd, Arthur W., M. D., Medical Superintendent Buffalo State Hospital, Buffalo, N. Y.
- 1879 Hurd, Heary M., M. D., Secretary Johns Hopkins Hospital, 1210 Fidelity Building, Baltimore, Md. (*President, 1899.*)
- 1897 Hutchings, Richard H., M. D., Medical Superintendent St. Lawrence State Hospital, Ogdensburg, N. Y.
- 1899 Hutchinson, Anna E., M. D., Woman Assistant Physician Manhattan State Hospital, Ward's Island, New York, N. Y. (*Associate.*)
- 1885 Hutchinson, Henry A., M. D., Medical Superintendent The Dixmont Hospital for the Insane, Dixmont, Pa.

## I

- 1901 Inch, Geo. Franklin, M. D., First Assistant Physician Kalamazoo State Hospital, Kalamazoo, Mich. (*Associate.*)
- 1913 Ingram, Robert, M. D., Neurologist Cincinnati Hospital, Cincinnati, O.
- 1912 Iaham, Mary Keyt, M. D., Assistant Physician Columbus State Hospital, Columbus, O. (*Associate.*)

## J

- 1913 Jackson, J. Allen, M. D., Chief Resident Physician Philadelphia Hospital for Insane, Philadelphia, Pa.
- 1912 Jacobs, Wilma H., M. D., Kankakee State Hospital, Hospital, Ill. (*Associate.*)
- 1913 Jacoby, J. Ralph, M. D., 54 West 88th St., New York, N. Y.
- 1908 Jelliffe, Smith Ely, M. D., Visiting Neurologist City Hospital, 64 West 56th St., New York, N. Y.
- 1903 Jelly, Arthur C., M. D., 10 Arlington St., Boston, Mass.
- 1909 Jones, L. M., M. D., Superintendent Georgia State Sanitarium, Milledgeville, Ga.
- 1909 Jordan, M. M., M. D., Assistant Physician Westborough State Hospital, Westborough, Mass. (*Associate.*)

## K

- 1906 Karpas, Morris J., M. D., Psychopathic Pavilion, Bellevue Hospital, New York, N. Y. (*Associate.*)
- 1914 Keatley, Harry W., M. D., Assistant Physician West Virginia Asylum, Huntington, W. Va. (*Associate.*)
- 1872 Kellogg, Theo. H., M. D., Riverdale Lane and Albany Postroad, Riverdale, New York, N. Y.
- 1913 Kelly, Wm. E., M. D., Assistant Physician Middletown State Homeopathic Hospital, Middletown, N. Y. (*Associate.*)
- 1914 Kempf, Edward J., M. D., Assistant Resident Physician Phipps Clinic, Johns Hopkins Hospital, Baltimore, Md. (*Associate.*)
- 1890 Keniston, J. M., M. D., Assistant Physician Connecticut Hospital for the Insane, Middletown, Conn. (*Associate.*)
- 1914 Keough, Peter L., M. D., Assistant Physician State Hospital, Crownsville, Md. (*Associate.*)
- 1912 Kern, W. B., M. D., 412 W. 6th St., Los Angeles, Cal.
- 1910 Kieb, Raymond F. C., M. D., Superintendent Matteawan State Hospital, Beacon, N. Y.
- 1890 Kilbourne, Arthur F., M. D., Medical Superintendent Rochester State Hospital, Rochester, Minn. (*President, 1909.*)
- 1895 Kindred, J. J., M. D., Proprietor and Consulting Physician of the River Crest Sanitarium, Astoria, L. I., N. Y.
- 1913 Kineon, G. G., M. D., Superintendent Ohio Hospital for Epileptics, Gallipolis, O.
- 1912 King, Florence A., M. D., Hudson River State Hospital, Poughkeepsie, N. Y. (*Associate.*)

- 1908 **King, George W., M.D.**, County Physician, Court House, 239½ Second St., Jersey City, N. J.
- 1910 **King, John C., M.D.**, Superintendent Southwestern State Hospital, Marion, Va.
- 1912 **King, Robert, M.D.**, Assistant Physician Buffalo State Hospital, Buffalo, N. Y. (*Associate.*)
- 1914 **Kingale, Alfred C., M.D.**, Superintendent Arizona State Hospital, Phoenix, Ariz.
- 1901 **Kinney, C. Spencer, M.D.**, Proprietor Easton Sanitarium, Easton, Pa.
- 1910 **Kirby, George H., M.D.**, Director Clinical Psychiatry Manhattan State Hospital, Ward's Island, New York, N. Y.
- 1905 **Kline, George M., M.D.**, Superintendent Danvers State Hospital, Hathorne, Mass.
- 1900 **Klopp, Henry I., M.D.**, Superintendent State Homeopathic Hospital, Allentown, Pa.
- 1899 **Knapp, John Rudolph, M.D.**, Assistant Physician Manhattan State Hospital, Ward's Island, New York, N. Y. (*Associate.*)
- 1913 **Knight, Arthur Clyde, M.D.**, Superintendent Montana State Hospital, Warm Springs, Mont.
- 1894 **Knowlton, W. M., M.D.**, Channing Sanitarium, Brookline, Mass.
- 1902 **Kuhlman, Helene J. C., M.D.**, Assistant Physician Buffalo State Hospital, Buffalo, N. Y. (*Associate.*)
- 1907 **Kuhn, William F., M.D.** (formerly Superintendent State Hospital No. 2, St. Joseph, Mo.), Room 1025 Rialto Building, Kansas City, Mo.

## L

- 1901 **Lamb, Robert B., M.D.**, 447 Third Ave., Troy, N. Y.
- 1900 **La Moure, Chas. T., M.D.**, Superintendent Connecticut School for Imbeciles, Lakeville, Conn.
- 1911 **La Moure, Howard A., M.D.**, Superintendent Colorado State Insane Asylum, Pueblo, Col.
- 1908 **Landers, George B., M.D.**, Second Assistant Superintendent Presbyterian Hospital, 70th St. and Madison Ave., New York, N. Y. (*Associate.*)
- 1912 **Lane, Arthur G., M.D.**, Assistant Physician St. Lawrence State Hospital, Ogdensburg, N. Y. (*Associate.*)
- 1892 **Lane, Edward B., M.D.**, Resident Physician Adams Nervine Asylum, 419 Boylston St., Boston, Mass.
- 1913 **Lang, Walter E., M.D.**, Senior Assistant Physician Homeopathic State Hospital, Allentown, Pa. (*Associate.*)
- 1903 **Langdon, F. W., M.D.**, Medical Director Cincinnati Sanitarium, at College Hill; Professor of Psychiatry, University of Cincinnati; College of Medicine, 4003 Rose Hill Ave., Cincinnati, Ohio.
- 1912 **Langdon, Fletcher, M.D.**, 4003 Rose Hill Ave., Cincinnati, Ohio.
- 1906 **Laughlin, Charles E., M.D.**, Superintendent Southern Indiana Hospital for the Insane, Evansville, Ind.



- 1907 Lawlor, Fred E., M.D., Superintendent Nova Scotia Hospital, Halifax, N. S.
- 1882 Lawton, Shaller E., M.D., Medical Superintendent Brattleboro Retreat, Brattleboro, Vt.
- 1911 Leader, Pauline M., M.D., Woman Physician Clarinda State Hospital, Clarinda, Iowa. (*Associate.*)
- 1912 Leahy, Sylvester R., M.D., Assistant Physician Manhattan State Hospital, Ward's Island, N. Y. (*Associate.*)
- 1901 Leak Roy L., M.D., 1048 Lancaster Ave., Syracuse, N. Y.
- 1912 Leavitt, William, M.D., Assistant Physician Central Islip State Hospital, Central Islip, N. Y. (*Associate.*)
- 1914 Lee Herbert, M.D., Resident Physician Dr. Woodson's Sanitarium, St. Joseph, Mo. (*Associate.*)
- 1914 Leehman, Helene G., M.D., Assistant Physician Essex County Hospital, Cedar Grove, N. J. (*Associate.*)
- 1913 Leonard, Edward F., M.D., 3501 N. Hermitage Ave., Chicago, Ill.
- 1913 Levin, Hyman L., M.D., St. Lawrence State Hospital, Ogdensburg, N. Y. (*Associate.*)
- 1900 Lewis, J. M., M.D. (formerly Superintendent Cleveland State Hospital), 436 Rose Bldg., Cleveland, Ohio.
- 1914 Lind, John E., M.D., Assistant Physician Government Hospital for Insane, Washington, D. C. (*Associate.*)
- 1910 Lindsay, S. C., M.D., Assistant Physician State Hospital, Independence, Iowa. (*Associate.*)
- 1913 Littlewood, Thomas, M.D., Assistant Superintendent Gardner State Colony, Gardner, Mass. (*Associate.*)
- 1899 Logie, Benjamin Rush, M.D., 1836 Connecticut Ave., Washington, D. C.
- 1909 Long, T. L., M.D., Assistant Physician Cherokee State Hospital, Cherokee, Iowa.
- 1911 Lorenz, William F., M.D., First Assistant Physician Wisconsin State Hospital for Insane, Mendota, Wis. (*Associate.*)
- 1909 Love, George R., M.D., Superintendent Toledo State Hospital, Toledo, Ohio.
- 1913 Lowe, Charles R., M.D., Jacksonville State Hospital, Jacksonville, Ill. (*Associate.*)
- 1903 Ludlum, Seymour DeWitt, M.D., Merion, Pa. (*Associate.*)
- 1912 Lustig, Daniel D., M.D., 146 Grant Ave., San Francisco, Cal.
- 1913 Lyon, Charles G., M.D., Superintendent Dr. Lyon's Sanitarium, Binghamton, N. Y.
- 1882 Lyon, Samuel B., M.D., "Shadyside," Prospect St. and Howard Place, White Plains, N. Y.

### M

- 1893 Maboz, William, M.D., Superintendent and Medical Director Manhattan State Hospital, Ward's Island, New York, N. Y.

- 1874 **MacDonald, Carlos F., M. D.**, 15 E. Forty-eighth St., New York., N. Y.  
(*President, 1914.*)
- 1914 **Macdonald, John B., M. D.**, Assistant Physician Danvers State Hospital, Hathorne, Mass. (*Associate.*)
- 1913 **Mack, Clifford W., M. D.**, Agnew State Hospital, Agnew, Cal. (*Associate.*)
- 1907 **Mackin, M. Charles, M. D.**, Assistant Physician State Hospital for Inebriates, Knoxville, Ia. (*Associate.*)
- 1906 **Mackintosh, J. A., M. D.**, Inverness Farm, R. D. No. 3, Easton, Md.
- 1912 **MacNaughton, Peter, M. D.**, Assistant Superintendent Hospital for Insane, Hamilton, Ont. (*Associate.*)
- 1902 **Macphail, Andrew, M. D., M. R. C. S., Eng., L. R. C. P., London**; Professor of Pathology and Bacteriology University of Bishop's College, Montreal; Consulting Pathologist to Protestant Hospital for the Insane, Montreal, 216 Peel St., Montreal, Que.
- 1909 **McAllaster, Benjamin R., M. D.** (formerly Superintendent State Hospital for Insane, Jamestown, N. D.), King City, Mo.
- 1894 **McBride, James H., M. D.**, 489 Bellefontaine St., Pasadena, Cal.
- 1909 **McCafferty, Emit L., M. D.**, Assistant Superintendent Mt. Vernon Hospital, Mt. Vernon, Ala.
- 1910 **McCampbell, John, M. D.**, Superintendent State Hospital, Morganton, N. C.
- 1909 **McCarthy, D. J., M. D.**, Professor of Medical Jurisprudence University of Pennsylvania and Woman's Medical College, Philadelphia, Pa.
- 1903 **McDonald, William, Jr., M. D.**, 188 Blackstone Boulevard, Providence, R. I.
- 1909 **McGaffin, Charles Gibson, M. D.**, Pathologist and Assistant Physician Kings Park State Hospital, Kings Park, N. Y.
- 1911 **McKay, James G., M. D.**, Assistant Physician Hospital for Insane, New Westminster, B. C. (*Associate.*)
- 1905 **McKelway, John Irvine, M. D.**, Second Assistant Superintendent Eastern Oregon State Hospital, Pendleton, Ore.
- 1907 **McKinniss, Clyde R., M. D.**, Superintendent Pittsburgh City Hospital, Boyce Station, Pa.
- 1897 **Macy, Wm. Austin, M. D.**, Medical Superintendent Kings Park State Hospital, Kings Park, L. I., N. Y.
- 1912 **Mahan, H. P., M. D.**, Assistant Physician Kansas State Hospital for Epileptics, Parsons, Kans. (*Associate.*)
- 1912 **Malberti, José A., M. D.**, Malberti's Sanitarium, Havana, Cuba.
- 1898 **Mallon, Peter S., M. D.**, Assistant Physician New Jersey State Hospital, Morris Plains, N. J.
- 1900 **Manton, Walter P., M. D.**, Gynecologist Eastern and Northern Michigan Asylums; Consulting Gynecologist St. Joseph's Retreat, 32 Adams Ave., West, Detroit, Mich.

- 1911 **Matthews, Adelbert C., M.D.**, First Assistant Physician Napa State Hospital, Napa, Cal. (*Associate.*)
- 1912 **Matsinger, Herman G., M.D.**, 90 Soldier's Place, Buffalo, N. Y.
- 1904 **Maxfield, Geo. H., M.D.**, Soldiers' Home, Chelsea, Mass. (*Associate.*)
- 1912 **May, Herman F., M.D.**, Assistant Physician Buffalo State Hospital, Buffalo, N. Y. (*Associate.*)
- 1910 **May, James V., M.D.**, Medical Member State Hospital Commission, Albany, N. Y.
- 1894 **Mayberry, Chas. B., M.D.**, Superintendent Hospital for the Insane of the Central Poor District of Luzerne County, Retreat, Luzerne Co., Pa.
- 1902 **Mayer, Edward E., M.D.**, Clinical Professor of Neurology University of Pittsburgh, Keenan Bldg., Pittsburgh, Pa.
- 1893 **Mead, Leonard C., M.D.**, Medical Superintendent South Dakota Hospital for the Insane, Yankton, S. D.
- 1912 **Mellus, Edward, M.D.**, Superintendent Dr. Mellus' Private Hospital, 419 Waverley Ave., Newton, Mass.
- 1891 **Meredith, Hugh B., M.D.**, Medical Superintendent State Hospital for the Insane, Danville, Pa.
- 1912 **Merriman, Willis E., M.D.**, Assistant Physician Hudson River State Hospital, Poughkeepsie, N. Y. (*Associate.*)
- 1893 **Meyer, Adolf, M.D.**, Professor of Psychiatry Johns Hopkins University, 101 Edgevale Road, Roland Park, Md.
- 1907 **Meyers, Donald Campbell, M.D.**, Superintendent Dr. Meyers' Hospital, 72 Heath St., Toronto, Canada.
- 1914 **Mikels, Frank M., M.D.**, Assistant Physician New Jersey State Hospital, Morris Plains, N. J. (*Associate.*)
- 1914 **Miller, C. Ross, M.D.**, Assistant Physician St. Lawrence State Hospital, Ogdensburg, N. Y. (*Associate.*)
- 1904 **Miller, Henry W., M.D.**, "Mountainbrook," Brewster, N. Y.
- 1893 **Mills, Chas. K., M.D.**, Professor of Neurology University of Pennsylvania, 1909 Chestnut St., Philadelphia, Pa.
- 1907 **Millsbaugh, Daniel T., M.D.**, Superintendent "Riverlawn," 47 Totowa Ave., Paterson, N. J.
- 1899 **Mitchell, H. W., M.D.**, Superintendent Warren State Hospital, Warren, Pa.
- 1912 **Mitchell, John C., M.D.**, Superintendent Hospital for the Insane, Brockville, Ont.
- 1908 **Mitchell, Roy E., M.D.**, Boberg Building, Eau Claire, Wis.
- 1911 **Mobley, John W., M.D.**, Assistant Physician State Sanitarium, Mill-edgeville, Ga. (*Associate.*)
- 1903 **Montgomery, Wm. H., M.D.**, Senior Assistant Physician Willard State Hospital, Willard, N. Y. (*Associate.*)
- 1906 **Moody, G. H., M.D.**, Superintendent Dr. Moody's Sanitarium, 315 Brackenridge Ave., San Antonio, Texas.

- 1912 Moore, Arthur S., M. D., Assistant Physician Middletown State Hospital, Middletown, N. Y. (*Associate.*)
- 1914 Moore, Joseph W., M. D., First Assistant Physician Matteawan State Hospital, Beacon, N. Y. (*Associate.*)
- 1896 Morel, Jules, M. D., Medical Superintendent State Asylum; Commissioner in Lunacy, 56 Boulevard Leopold, Ghent, Belgium. (*Honorary.*)
- 1913 Morris, John N., M. D., Springfield State Hospital, Sykesville, Md. (*Associate.*)
- 1913 Morse, Mary E., M. D., Worcester State Hospital, Worcester, Mass. (*Associate.*)
- 1893 Mosher, J. Montgomery, M. D., 170 Washington Ave., Albany, N. Y.
- 1881 Motet, A. M., M. D., 161 Rue de Charonne, Paris, France. (*Honorary.*)
- 1889 Moulton, A. R., M. D., 5431 Locust St., Philadelphia, Pa.
- 1886 Munson, James D., M. D., Medical Superintendent Northern Michigan Asylum, Traverse City, Mich.
- 1907 Munson, James F., M. D., Resident Pathologist Craig Colony for Epileptics, Sonyea, N. Y.
- 1909 Murdock, J. Morehead, M. D., Superintendent State Institution Feeble-Minded of Western Pennsylvania, Polk, Pa.
- 1914 Murphy, Wm. A., M. D., Assistant Physician State Hospital, Goldsboro, N. C. (*Associate.*)
- 1912 Myers, Glenn E., M. D., Psychiatric Institute, Ward's Island, New York, N. Y. (*Associate.*)

## N

- 1914 Nairn, B. Ross, M. D., 512 Franklin St., Buffalo, N. Y.
- 1910 Neely, James J., M. D., Superintendent Western Hospital for Insane, Bolivar, Tenn.
- 1896 Neff, Irwin H., M. D., Superintendent Norfolk State Hospital, Pondville, Mass.
- 1913 Neff, Mary Lawson, M. D., State Board of Administration, Springfield, Ill.
- 1914 Neuhaus, George E., M. D., Superintendent Mt. Airy Sanatorium, Denver, Col.
- 1905 Nevin, Ethan A., M. D., Superintendent Custodial Asylum, Newark, N. Y.
- 1913 Nevin, John, M. D., North Hudson Hospital, Jersey City, N. J.
- 1913 Nevitt, C. A., M. D., Superintendent Elmwood Sanitarium, Lexington, Ky.
- 1900 Nichols, John H., M. D., Resident Physician and Superintendent State Hospital, Tewksbury, Mass.
- 1913 Nickerson, Mary A., M. D., Rochester State Hospital, Rochester, N. Y. (*Associate.*)
- 1886 Nims, Edward B., M. D. (formerly Superintendent Northampton Insane Hospital), 40 Harvard St., Springfield, Mass.

- 1892 Noble, Alfred I., M. D., Superintendent Kalamazoo State Hospital, Kalamazoo, Mich.
- 1912 Noble, Ermy C., M. D., Assistant Physician Boston State Hospital, Dorchester Centre, Mass. (*Associate.*)
- 1912 Noble, Mary E. Gill, M. D., Assistant Physician Boston State Hospital, Dorchester Centre, Mass. (*Associate.*)
- 1903 Norbury, Frank P., M. D., Medical Director, The Norbury Sanatorium, Jacksonville, Ill.
- 1912 Norquay, H. C., M. D., Assistant Superintendent Selkirk Hospital for Insane, Selkirk, Manitoba, Canada. (*Associate.*)
- 1906 North, Charles H., M. D., Superintendent Dannemora State Hospital, Dannemora, N. Y.
- 1914 North, Emerson A., M. D., Resident Physician Cincinnati Sanitarium, Cincinnati, O. (*Associate.*)
- 1907 Norton, Eben C., M. D., Physician-in-Charge Norwood Private Hospital for Mental Diseases, Norwood, Mass.
- 1898 Noyes, William, M. D. (formerly Superintendent Boston State Hospital, Mattapan, Mass.), 11 St. John St., Jamaica Plain, Mass.

## O

- 1904 O'Brien, John D., M. D., New Pomerene Building, Canton, O. (*Associate.*)
- 1913 O'Brien, John F., M. D., Taunton State Hospital, Taunton, Mass. (*Associate.*)
- 1905 O'Hanlon, George, M. D., Bellevue Hospital, New York, N. Y.
- 1912 O'Harrow, Marian, M. D., Friends' Asylum, Frankford, P. O. Box 20, Station F, Philadelphia, Pa. (*Associate.*)
- 1908 O'Malley, Mary, M. D., Woman Assistant Physician, Government Hospital for Insane, Washington, D. C. (*Associate.*)
- 1889 Orth, H. L., M. D., Superintendent and Physician Pennsylvania State Lunatic Hospital, Harrisburg, Pa.
- 1907 Orton, Samuel T., M. D., Clinical Director and Pathologist Pennsylvania Hospital for Insane, Philadelphia, Pa. (*Associate.*)
- 1910 Osborn, W. S., M. D., 605 Fleming Bldg., Des Moines, Ia.
- 1898 Ostrander, Herman, M. D., Assistant Superintendent Kalamazoo State Hospital, Kalamazoo, Mich.
- 1913 Overholser, M. P., M. D., Superintendent State Hospital No. 3, Nevada, Mo.

## P

- 1907 Packard, Frederick H., M. D., Assistant Physician McLean Hospital, Waverley, Mass. (*Associate.*)
- 1904 Packer, Flavius, M. D., Physician-in-Charge, West Hill, 261st St. and Broadway, New York, N. Y.
- 1889 Page, Charles W., M. D., 94 Woodland St., Hartford, Conn.

- 1894 Page, H. W., M.D., Superintendent Hospital Cottages for Children, Baldwinville, Mass.
- 1912 Paine, Harlan L., M.D., Assistant Superintendent Gardner State Colony, Gardner, Mass. (*Associate.*)
- 1887 Paine, N. Emmons, M.D. (formerly Superintendent Westborough State Hospital), The Newton Sanatorium, West Newton, Mass.
- 1914 Palmer, E., M.D., Assistant Physician Northern Hospital for Insane, Logansport, Ind. (*Associate.*)
- 1897 Palmer, Harold L., M.D., Superintendent Utica State Hospital, Utica, N. Y.
- 1894 Parant, A. Victor, M.D., Toulouse, France. (*Honorary.*)
- 1912 Parker, Charles S., M.D., Assistant Physician Kings Park State Hospital, Kings Park, N. Y. (*Associate.*)
- 1913 Parker, George M., M.D., St. Vincent's Hospital, New York, N. Y.
- 1905 Parsons, Frederick W., M.D., First Assistant Physician Hudson River State Hospital, Poughkeepsie, N. Y. (*Associate.*)
- 1913 Parsons, Richard H., M.D., Burlington Co. Hospital for Insane, Mt. Holly, N. J.
- 1909 Partlow, William D., M.D., Assistant Superintendent The Bryce Hospital, Tuscaloosa, Ala.
- 1913 Patterson, Christopher J., M.D., Physician-in-Charge, Marshall Sanitarium, Troy, N. Y.
- 1912 Payne, Guy, M.D., Medical Superintendent Essex Co. Hospital for Insane, Cedar Grove, N. J.
- 1897 Pease, Caroline S., M.D., Assistant Physician St. Lawrence State Hospital, Ogdensburg, N. Y. (*Associate.*)
- 1912 Pecival, Joseph P., M.D., Superintendent Chicago State Hospital, Dunning, Ill.
- 1901 Perry, Middleton L., M.D., Superintendent Kansas State Hospital for Epileptics, Parsons, Kans.
- 1893 Peterson, Frederick, M.D., Professor of Psychiatry Columbia University, 20 W. 50th St., New York, N. Y.
- 1912 Peterson, Jessie M., M.D., Resident Physician Department for Women, State Hospital, Norristown, Pa.
- 1913 Petery, Arthur K., M.D., State Hospital for the Insane, Norristown, Pa. (*Associate.*)
- 1912 Pettibone, Ralph S., M.D., Assistant Physician Willard State Hospital, Willard, N. Y. (*Associate.*)
- 1912 Pettijohn, Abra C., M.D., Room 24, Masonic Temple, Brookfield, Mo.
- 1914 Pfeiffer, J. A. F., M.D., Government Hospital for Insane, Washington, D. C. (*Associate.*)
- 1913 Phelps, R. M., M.D., Superintendent St. Peter State Hospital, St. Peter, Minn.
- 1912 Phillips, Horace, M.D., 905 Land Title Building, care of B. Griffith Jones, Philadelphia, Pa. (*Associate.*)
- 1910 Pierson, Clarence, M.D., Superintendent East Louisiana Hospital for Insane, Jackson, La.

- 1914 Pierson, Helena B., M. D., Assistant Physician Kings Park State Hospital, Kings Park, N. Y. (*Associate.*)
- 1913 Pierson, Sarah G., M. D., Rochester State Hospital, Rochester, N. Y. (*Associate.*)
- 1913 Pietrowicz, Stephen R., M. D., Superintendent Dunning Institutions, Chicago, Ill.
- 1890 Pilgrim, Chas. W., M. D., Superintendent Hudson River State Hospital, Poughkeepsie, N. Y. (*President, 1911.*)
- 1910 Pitman, Mason W. H., M. D., Riverdale-on-Hudson, New York, N. Y.
- 1914 Poate, Ernest M., M. D., Senior Assistant Physician Manhattan State Hospital, Ward's Island, New York. (*Associate.*)
- 1914 Podall, H. C., M. D., Assistant Physician State Hospital, Norristown, Pa. (*Associate.*)
- 1912 Pogue, Mary E., M. D., Physician-in-Charge, Oak Leigh Sanitarium, Lake Geneva, Wis.
- 1910 Pollock, Henry M., M. D., Superintendent Norwich Hospital for the Insane, Norwich, Conn.
- 1905 Porteous, Carlyle A., M. D., Assistant Superintendent Protestant Hospital for the Insane, New P. O. Box 2280, Special Bag, Montreal, Canada.
- 1911 Porter, William C., M. D., Assistant Physician Hudson River State Hospital, Poughkeepsie, N. Y. (*Associate.*)
- 1912 Potter, Clarence A., M. D., First Assistant Physician Gowanda State Hospital, Collins, N. Y. (*Associate.*)
- 1892 Potter, Ezra B., M. D., First Assistant Physician Rochester State Hospital, Rochester, N. Y.
- 1913 Potter, Frederick C., M. D., Pathologist Central Indiana Hospital for Insane, Indianapolis, Ind. (*Associate.*)
- 1913 Powers, Herbert Wm., M. D., Milwaukee Sanitarium, Wauwatosa, Wis.
- 1906 Preston, John, M. D., Superintendent State Lunatic Asylum, Austin, Tex.
- 1908 Priddy, A. S., M. D., Superintendent Virginia State Epileptic Colony, Madison Heights, Va
- 1913 Priestman, Gordon, M. D., Assistant Physician, Willard State Hospital, Willard, N. Y. (*Associate.*)
- 1914 Pritchard, John A., M. D., Senior Assistant Physician St. Lawrence State Hospital, Ogdensburg, N. Y. (*Associate.*)
- 1913 Pritchard, William B., M. D., New York City Hospital, Blackwell's Island, New York, N. Y.
- 1908 Pritchard, William H., M. D., 501 Second Ave., Gallipolis, O.
- 1898 Prout, Thos. P., M. D., Fair Oaks Sanitarium, Summit, N. J.
- 1912 Purdum, Harry D., M. D., Assistant Physician Springfield State Hospital, Sykesville, Md. (*Associate.*)
- 1898 Putnam, Emma, M. D., Poughkeepsie, N. Y.

## Q

- 1879 **Quinby, Hosea M., M. D.** (formerly Medical Superintendent Worcester State Hospital), Worcester, Mass.

## R

- 1910 **Ramsey, William E., M. D.**, Perth Amboy, N. J.  
 1909 **Randolph, James H., M. D.**, St. James Building, Jacksonville, Fla. (*Associate.*)  
 1894 **Ratliff, J. M., M. D.**, Medical Superintendent Grandview Sanitarium, Price Hill, Cincinnati, O.  
 1913 **Ratliff, Thomas A., M. D.**, Grandview Sanitarium, Price Hill, Cincinnati, O.  
 1909 **Raynor, Mortimer W., M. D.**, Senior Assistant Physician Hudson River State Hospital, Poughkeepsie, N. Y. (*Associate.*)  
 1912 **Read, Charles F., M. D.**, Assistant Superintendent Kankakee State Hospital, Hospital, Ill. (*Associate.*)  
 1913 **Reed, Ralph G., M. D.**, Assistant Physician State Hospital, Central Islip, N. Y. (*Associate.*)  
 1896 **Régis, Emmanuel, M. D.**, Bordeaux, France. (*Honorary.*)  
 1914 **Reid, Eva C., M. D.**, After-Care Physician California State Hospitals, University of California Hospital, San Francisco, Cal. (*Associate.*)  
 1914 **Reily, John A., M. D.**, Superintendent Southern California State Hospital, Patton, Cal.  
 1911 **Rhein, John H. W., M. D.**, Professor Diseases of Mind and Nervous System, Philadelphia Polyclinic and College of Medicine, 1732 Pine St., Philadelphia, Pa.  
 1912 **Richards, Cyril G., M. D.**, Assistant Physician Long Island Hospital, Boston Harbor, Mass. (*Associate.*)  
 1911 **Richards, Robert L., M. D.**, Superintendent Mendocino State Hospital, Talmage, Cal.  
 1904 **Richardson, Wm. W., M. D.**, Medical Director The Mercer Sanitarium, Mercer, Pa.  
 1908 **Rickaher, Charles, M. D.**, Assistant Physician State Psychopathic Institute, Kankakee, Ill.  
 1913 **Ridgway, R. F. L., M. D.**, Pennsylvania State Lunatic Hospital, Harrisburg, Pa. (*Associate.*)  
 1902 **Riggs, Charles Eugene, M. D.**, Professor of Nervous and Mental Diseases and Chief of Department Neurology and Psychiatry, University of Minnesota, 10 Crocus Hill, St. Paul, Minn.  
 1911 **Riggs, George Henry, M. D.**, Superintendent Riggs Cottage-Sanitarium, Ijamsville, Md.  
 1910 **Ripley, Horace G., M. D.**, Assistant Superintendent State Hospital, Taunton, Mass.



- 1899 Ritti, Antoine, M. D., Honorary Physician-in-Chief Maison Nationale de Charenton, 68 Boulevard Exelmans, Paris, France. (*Honorary.*)
- 1901 Robertson, Frank W., M. D. (formerly General Superintendent New York State Reformatory at Elmira), 422 West End Ave., New York.
- 1908 Robins, William L., M. D., 1700 13th St., N. W., Washington, D. C.
- 1911 Robinson, G. Wilse, M. D., Superintendent The Punton Sanitarium, Kansas City, Mo.
- 1913 Robinson, Hedley V., M. D., Assistant Physician Protestant Hospital for the Insane, New P. O. Box 2280, Montreal, Que. (*Associate.*)
- 1909 Robinson, W. J., M. D., Superintendent Asylum for the Insane, London, Ontario.
- 1912 Rogers, Arthur W., M. D., Superintendent Oconomawoc Health Resort for Nervous and Mental Diseases, Oconomawoc, Wis.
- 1907 Rogers, Chas. B., M. D., Physician-in-Charge Fair Oaks Villa, Cuyahoga Falls, O. (*Associate.*)
- 1913 Rogers, John B., M. D., Assistant Physician Napa State Hospital, Napa, Cal. (*Associate.*)
- 1912 Rooks, J. T., M. D., Assistant Physician Kankakee State Hospital, Hospital, Ill. (*Associate.*)
- 1909 Rosanoff, A. J., M. D., First Assistant Physician Kings Park State Hospital, Kings Park, N. Y.
- 1907 Ross, Donald L., M. D., Superintendent Connecticut Colony for Epileptics, Mansfield Depot, Conn.
- 1912 Ross, John R., M. D., First Assistant Physician Dannemora State Hospital, Dannemora, N. Y. (*Associate.*)
- 1899 Rowe, John T. W., M. D., First Assistant Physician Manhattan State Hospital, Ward's Island, New York, N. Y.
- 1911 Rowe, Melvin J., M. D., Monrovia, Cal. (*Associate.*)
- 1912 Rowland, George A., M. D., Assistant Physician Columbus State Hospital, Columbus, O. (*Associate.*)
- 1913 Ruggles, Arthur H., M. D., Assistant Physician Butler Hospital, Providence, R. I. (*Associate.*)
- 1907 Ruland, Frederick D., M. D., Proprietor Dr. Ruland's Sanitarium, Westport, Conn.
- 1912 Runyon, Wm. D., M. D., Assistant Physician State Sanatorium for Treatment of Tuberculosis, Oakdale, Ia. (*Associate.*)
- 1913 Russell, Clarence L., M. D., Assistant Physician Hudson River State Hospital, Poughkeepsie, N. Y. (*Associate.*)
- 1912 Russell, Rose A., M. D., Assistant Physician Cherokee State Hospital, Cherokee, Ia. (*Associate.*)
- 1898 Russell, Wm. L., M. D., Superintendent Bloomingdale Hospital, White Plains, N. Y.
- 1907 Ryan, Edward, M. D., Superintendent Rockwood Hospital for the Insane, Kingston, Ontario.

- 1899 Ryon, Walter G., M. D., Medical Inspector for State Hospital Commission, Albany, N. Y.

## S

- 1894 Sachs, B., M. D., 116 W. 59th St., New York, N. Y.  
 1912 Salmon, Thomas W., M. D., National Committee for Mental Hygiene, 50 Union Square, New York, N. Y.  
 1908 Sandy, William C., M. D., Assistant Physician Kings Park State Hospital, Kings Park, N. Y. (*Associate.*)  
 1912 Sanford, Walter H., M. D., Assistant Physician Kings Park State Hospital, Kings Park, N. Y. (*Associate.*)  
 1913 Sargent, George F., M. D., Assistant Physician Sheppard and Enoch Pratt Hospital, Towson, Md. (*Associate.*)  
 1913 Saunders, Eleanor B., M. D., Waverley Sanitarium, Columbia, S. C. (*Associate.*)  
 1909 Scanland, J. M., M. D., Warm Springs, Montana.  
 1913 Schenkelberger, Frederick P., M. D., Gowanda State Hospital, Collins, N. Y. (*Associate.*)  
 1909 Schlapp, Max G., M. D., Lecturer on Neuro-Histology and Pathology, Cornell University, 40 E. 41st St., New York City.  
 1914 Schley, R. Montfort, M. D., 267 Elmwood Ave., Buffalo, N. Y.  
 1894 Schmid, H. Ernest, M. D., White Plains, N. Y.  
 1912 Schneider, C. von A., M. D., Assistant Physician Gowanda State Hospital, Collins, N. Y. (*Associate.*)  
 1910 Schwinn, George H., M. D., Government Hospital for the Insane, Washington, D. C. (*Associate.*)  
 1912 Scott, Thompson P., M. D., First Assistant Physician Topeka State Hospital, Topeka, Kans. (*Associate.*)  
 1886 Scribner, Ernest V., M. D., Medical Superintendent Worcester State Hospital, Worcester, Mass.  
 1893 Searcy, James T., M. D., Medical Superintendent The Alabama Insane Hospitals, Tuscaloosa, Ala. (*President, 1913.*)  
 1894 Searl, Wm. A., M. D., Medical Director Fair Oaks Villa, Cuyahoga Falls, Ohio.  
 1889 Sefton, Frederick, M. D., The Pines, Auburn, N. Y.  
 1897 Semelaigne, René, M. D., Medecin en Chef Maison de Santé, Neuilly sur Seine, Paris, France. (*Honorary.*)  
 1892 Semple, John M., M. D., Superintendent Eastern Washington Hospital for the Insane, Medical Lake, Wash.  
 1908 Seybert, Frank T., M. D., Alienist St. Bernard's Hospital, 532 First Ave., Council Bluffs, Iowa.  
 1903 Shanahan, Wm. T., M. D., Medical Superintendent Craig Colony for Epileptics, Sonyea, N. Y.  
 1903 Sharp, Edw. A., M. D., 481 Franklin St., Buffalo, N. Y.  
 1913 Shaw, Arthur L., M. D., Assistant Physician Craig Colony for Epileptics, Sonyea, N. Y. (*Associate.*)

- 1914 Sheehan, Robert F., M. D., Government Hospital for Insane, Washington, D. C. (*Associate.*)
- 1909 Shellenberger, Edward B., M. D., Assistant Physician State Hospital for Insane, Danville, Pa. (*Associate.*)
- 1904 Shepherd, Arthur F., M. D., Ohio State Board of Administration, Columbus, Ohio.
- 1912 Sherman, Adin, M. D., Superintendent Northern Hospital for Insane, Winnebago, Wis.
- 1905 Shirres, David Alexander, M. D., Consulting Neurologist to the Protestant Hospital for the Insane, 670 W. Sherbrooke St., Montreal, Can.
- 1912 Sights, H. P., M. D., Superintendent Western Kentucky Asylum, Hopkinsville, Ky.
- 1914 Simon, Theodore W., M. D., Senior Assistant Physician State Hospital, Central Islip, N. Y. (*Associate.*)
- 1892 Simpson, J. C., M. D., 1421 Massachusetts Ave., Washington, D. C.
- 1910 Skinner, William W., M. D., Consulting Surgeon State Hospital, Willard, N. Y., 449 Main St., Geneva, N. Y.
- 1905 Skoog, A. L., M. D., Associate Professor of Neurology, University of Kansas, 1004 Rialto Building, Kansas City, Mo.
- 1904 Slocum, Clarence J., M. D., Resident Physician Dr. MacDonald's House, Central Valley, Orange County, N. Y. (*Associate.*)
- 1885 Smith, Edwin Everett, M. D. (formerly Medical Director New Jersey State Hospital), Kensett, Norwalk, Conn.
- 1898 Smith, Geo. A., M. D., Medical Superintendent Central Islip State Hospital, Central Islip, L. I., N. Y.
- 1902 Smith, Gilbert T., M. D., Box 91, Stamford, Conn. (*Associate.*)
- 1912 Smith, H. M., M. D., Superintendent New Mexico Insane Asylum, Las Vegas, N. Mex.
- 1913 Smith, H. V. A., M. D., Superintendent Hudson Co. Hospital for Insane, Jersey City, N. J.
- 1913 Smith, J. Anson, M. D., Camden County Hospital for Insane, Blackwood, N. J.
- 1913 Smith, J. G. Fowble, M. D., Assistant Physician Springfield State Hospital, Sykesville, Md. (*Associate.*)
- 1911 Smith, Joseph, M. D., Assistant Physician Long Island State Hospital, Brooklyn, N. Y. (*Associate.*)
- 1914 Smith, R. W. Bruce, M. D., Inspector of Hospitals and Public Charities, Parliament Building, Toronto, Ont.
- 1912 Smith, Robert P., M. D., Cobb Building, Seattle, Wash.
- 1891 Smith, S. E., M. D., Medical Superintendent Eastern Indiana Hospital for the Insane, "Easthaven," Richmond, Ind. (*President, 1915.*)
- 1885 Smith, Stephen, M. D., 300 Central Park, West, New York, N. Y. (*Honorary.*)

- 1914 Smithson, Wm. W., M.D., Superintendent State Insane Hospital, Jackson, Miss.
- 1911 Snavelly, Earl H., M.D., Assistant Physician Essex County Hospital for Insane, Cedar Grove, N. J. (*Associate.*)
- 1908 Solier, Charles H., M.D., Superintendent State Hospital, Evanston, Wyo.
- 1898 Somers, Elbert M., M.D., Superintendent Long Island State Hospital, Brooklyn, N. Y.
- 1913 Somerville, William G., M.D., Neurologist City Hospital, Memphis, Tenn.
- 1907 Southard, Elmer E., M.D., Director Psychopathic Department, Boston State Hospital, 70 Francis Ave., Cambridge, Mass.
- 1913 Spalding, Harry O., M.D., Acting Superintendent Westborough State Hospital, Westborough, Mass.
- 1914 Spear, Irving J., M.D., 1810 Madison Ave., Baltimore, Md.
- 1899 Spence, James Beveridge, M.D., R. U. I., M. Ch., Resident Physician and Superintendent Staffordshire County Asylum, Burntwood, near Litchfield, England. (*Honorary.*)
- 1894 Sprague, Geo. P., M.D., Superintendent High Oaks Sanitarium, Lexington, Ky.
- 1914 Stack, S. S., M.D., Superintendent Sacred Heart Sanitarium and St. Mary's Hill Hospital, Milwaukee, Wis.
- 1914 Stancell, W. W., M.D., Assistant Physician State Hospital, Raleigh, N. C. (*Associate.*)
- 1892 Stanley, Charles E., M.D., Assistant Physician Connecticut Hospital for the Insane, Middletown, Conn. (*Associate.*)
- 1913 Stearns, Albert Warren, M.D., 520 Commonwealth Ave., Boston, Mass. (*Associate.*)
- 1898 Stearns, Wm. G., M.D., 25 E. Washington St., Chicago, Ill.
- 1914 Steckel, Harry A., M.D., Assistant Physician Kings Park State Hospital, Kings Park, N. Y. (*Associate.*)
- 1884 Stedman, Henry R., M.D., Bournewood Private Hospital for Nervous and Mental Diseases, South St., Brookline, Mass.
- 1895 Stevens, Frank T., M.D., 609 Exchange National Bank Building, Colorado Springs, Colo.
- 1894 Stewart, Nolan, M.D. (formerly Superintendent State Insane Hospital), Jackson, Miss.
- 1914 Stewart, Robert A., M.D., 539 W. Main St., Lock Haven, Pa. (*Associate.*)
- 1907 Stick, H. Louis, M.D., Superintendent Worcester State Asylum, Worcester, Mass.
- 1910 Stocking, Leonard, M.D., Superintendent State Hospital, Agnew, Cal.
- 1904 Stockton, Geo., M.D. (formerly Superintendent Columbus State Hospital), 151 E. Broad St., Columbus, O.
- 1909 Stone, Elmer E., M.D. (formerly Superintendent Napa State Hospital, Napa, Cal.), 291 Geary St., San Francisco, Cal.

- 1892 Stone, William A., M. D. (formerly Assistant Superintendent Michigan Asylum for the Insane), 1102 W. Main St., Kalamazoo, Mich.
- 1914 Strecker, Edward A., M. D., Assistant Physician Pennsylvania Hospital for Insane, Philadelphia, Pa. (*Associate.*)
- 1913 Sturgis, Karl B., M. D., Assistant Physician Maine Insane Hospital, Augusta, Me. (*Associate.*)
- 1912 Sullivan, F. J., M. D., Kankakee State Hospital, Hospital, Ill. (*Associate.*)
- 1903 Swift, Henry M., M. D., 655 Congress St., Portland, Me.
- 1914 Swift, Walter B., M. D., 110 Bay State Road, Boston, Mass.
- 1894 Sylvester, William E., M. D., Lincoln Wood-on-Canandaigua Lake, N. Y.

## T

- 1899 Taddiken, Paul Gerald, M. D., First Assistant Physician St. Lawrence State Hospital, Ogdensburg, N. Y. (*Associate.*)
- 1881 Tamburini, A., M. D., Reggio-Emilia, Italy. (*Honorary.*)
- 1914 Taylor, Herbert W., M. D., First Assistant Physician Brattleboro Retreat, Brattleboro, Vt. (*Associate.*)
- 1892 Taylor, Isaac M., M. D., Superintendent Broadoaks Sanatorium, Morganton, N. C.
- 1910 Terflinger, Fred. W., M. D., Medical Superintendent Northern Hospital for Insane, Logansport, Indiana.
- 1914 Thomas, John N., M. D., Superintendent Louisiana Hospital for Insane, Pineville, La.
- 1906 Thompson, Charles E., M. D., Superintendent Gardner State Colony, Gardner, Mass.
- 1891 Thompson, J. L., M. D., Assistant Physician State Hospital for the Insane, Columbia, S. C. (*Associate.*)
- 1912 Thompson, Nelson W., M. D., Flower Hospital, 450 E. 64th St., New York. (*Associate.*)
- 1896 Thompson, Whitefield N., M. D., Medical Superintendent The Hartford Retreat, Hartford, Conn.
- 1913 Thomson, A. W., M. D., 91 Garden St., Poughkeepsie, N. Y. (*Associate.*)
- 1914 Thorne, Frederic H., M. D., Pathologist New Jersey State Hospital, Morris Plains, N. J. (*Associate.*)
- 1912 Throckmorton, Tom B., M. D., 407 Equitable Building, Des Moines, Ia. (*Associate.*)
- 1914 Thurlow, A. A., M. D., First Assistant Physician Oklahoma Hospital for Insane, Norman, Okla. (*Associate.*)
- 1912 Tiffany, William J., M. D., Assistant Physician Binghamton State Hospital, Binghamton, N. Y. (*Associate.*)
- 1912 Todd, Leona E., M. D., Woman Physician Hudson River State Hospital, Poughkeepsie, N. Y. (*Associate.*)

- 1912 Toomey, Joseph H., M. D., State Hospital for Insane, Howard, R. I. (*Associate.*)
- 1901 Torney, Geo. H., Jr., M. D., Bournewood Hospital, South St., Brookline, Mass.
- 1902 Toulouse, Edouard, M. D., Physician-in-Chief to Villejuif Asylum; Director Revue de Psychiatrie; Director of Laboratory of Experimental Psychology, l'Ecole des Hautes Etudes, Paris; Villejuif (Seine), France. (*Honorary.*)
- 1899 Townsend, Theodore Irving, M. D., First Assistant Physician Binghamton State Hospital, Binghamton, N. Y.
- 1913 Trader, Wm. N., M. D., Assistant Physician Craig Colony for Epileptics, Sonyea, N. Y. (*Associate.*)
- 1914 Travis, John H., M. D., Assistant Physician Danvers State Hospital, Hathorne, Mass. (*Associate.*)
- 1912 Treadway, Walter L., M. D., Assistant Surgeon U. S. Public Health Service, Ellis Island, New York.
- 1912 Trenkle, Henry L., M. D., Physician-in-Charge Knickerbocker Hall, Amityville, L. I. (*Associate.*)
- 1914 Trueman, Nelson G., M. D., Assistant Physician Danvers State Hospital, Hathorne, Mass. (*Associate.*)
- 1912 Truitt, R. P., M. D., Clinical Director East Louisiana Hospital for Insane, Jackson, La.
- 1901 Turner, John S., M. D., 326-27 Linz Bldg., Dallas, Texas.
- 1913 Turner, Reeve, M. D., 522 West 149th St., New York, N. Y.
- 1892 Tuttle, Geo. T., M. D., Medical Superintendent McLean Hospital, Waverley, Mass.
- 1908 Twohey, John J., M. D., Physician-in-Charge Providence Retreat, Buffalo, N. Y.
- 1909 Tyson, Forrest C., M. D., Superintendent Augusta State Hospital, Augusta, Me.

## U

- 1909 Uhls, L. L., M. D., The Uhls Sanitarium, Overland Park, Kans.
- 1914 Ullman, Albert E., M. D., Senior Assistant Physician State Hospital, Central Islip, N. Y. (*Associate.*)
- 1899 Urquhart, Alexander R., M. D., F. R. C. P. E., Superintendent Royal Asylum, Perth, Scotland. (*Honorary.*)

## V

- 1911 VanWart, Roy McLean, M. D., Visiting Physician to Nervous Wards of Charity Hospital, 1126 Maison Blanche Building, New Orleans, La.
- 1907 Vaughan, P. H. S., M. D., Yarmouth, Me.
- 1913 Vaux, Charles L., M. D., Senior Assistant Physician, State Hospital, Central Islip, N. Y. (*Associate.*)

- 1912 Veeder, Willard H., M. D., Assistant Physician Rochester State Hospital, Rochester, N. Y. (*Associate.*)
- 1896 Villeneuve, George, M. D., Medical Superintendent Saint Jean de Dieu Hospital, New P. O. Box 2947, Montreal, Que.
- 1893 Voldeng, M. Nelson, M. D., Superintendent State Hospital and Colony for Epileptics, Woodward, Iowa.
- 1912 Vosburgh, Stephen E., M. D., Assistant Superintendent Maine Insane Hospital, Augusta, Me. (*Associate.*)

## W

- 1895 Wade, J. Percy, M. D., Medical Superintendent Spring Grove Hospital for the Insane, Catonsville, Md.
- 1890 Wagner, Charles G., M. D., Medical Superintendent Binghamton State Hospital, Binghamton, N. Y. (*Secretary and Treasurer.*)
- 1912 Walker, Eloise, M. D., Woman Physician, Binghamton State Hospital, Binghamton, N. Y. (*Associate.*)
- 1905 Walker, Irving Lee, M. D., Assistant Physician Rochester State Hospital, Rochester, N. Y. (*Associate.*)
- 1905 Walker, Lewis M., M. D., First Assistant Physician Medfield State Asylum, Medfield, Mass.
- 1914 Walker, N. P., M. D., Assistant Physician Georgia State Sanitarium, Milledgeville, Ga. (*Associate.*)
- 1913 Wardner, Drew M., Essex County Hospital for Insane, Cedar Grove, N. J. (*Associate.*)
- 1918 Washburn, Philip C., M. D., Assistant Physician Kings Park State Hospital, Kings Park, N. Y. (*Associate.*)
- 1912 Waterman, Chester, M. D., Assistant Physician Willard State Hospital, Willard, N. Y. (*Associate.*)
- 1914 Waterman, Paul, M. D., Assistant Neurologist Hartford Hospital, Hartford, Conn.
- 1913 Webster, B. R., M. D., Assistant Physician Matteawan State Hospital, Beacon, N. Y. (*Associate.*)
- 1910 Weeks, David F., M. D., Medical Superintendent and Executive Officer New Jersey State Village for Epileptics, Skillman, N. J.
- 1913 Weisenburg, T. H., M. D., 2030 Chestnut St., Philadelphia, Pa.
- 1893 Welch, G. O., M. D., Medical Superintendent Fergus Falls State Hospital, Fergus Falls, Minn.
- 1892 Wentworth, Lowell F., M. D., Deputy Executive Officer State Board of Insanity, 36 State House, Boston, Mass.
- 1914 Wescott, Adeline M., M. D., State Hospital, Central Islip, N. Y. (*Associate.*)
- 1904 West, Calvin B., M. D., Senior Assistant Physician Kings Park State Hospital, Kings Park, N. Y. (*Associate.*)
- 1912 Weston, Paul G., M. D., Pathologist State Hospital, Warren, Pa. (*Associate.*)

- 1904 Wherry, J. W., M. D. (formerly Medical Superintendent "Glenwood," Dansville, N. Y.), Los Gatos, California. (*Associate.*)
- 1912 White, F. S., M. D., Superintendent Southwestern Insane Asylum, San Antonio, Tex.
- 1906 White, Grace E., M. D., Wood Lea Sanitarium, 300 Ardmore Ave., Ardmore, Pa. (*Associate.*)
- 1891 White, M. J., M. D., Medical Superintendent Milwaukee Hospital for the Insane, Wauwatosa, Wis.
- 1902 White, Wm. A., M. D., Superintendent Government Hospital for the Insane, Washington, D. C.
- 1909 White, William Rushmore, M. D., Superintendent Patapsco Manor Sanitarium, Ellicott City, Md.
- 1912 Whitney, Ray L., M. D., First Assistant Physician McLean Hospital, Waverley, Mass. (*Associate.*)
- 1914 Wholey, Cornelius C., M. D., 4616 Bayard St., E. E., Pittsburgh, Pa.
- 1903 Wilcox, Franklin S., M. D., Assistant Superintendent Southern California State Hospital, Patton, Cal. (*Associate.*)
- 1898 Wilgus, Sidney D., M. D., Superintendent and Proprietor The Ransom Sanitarium, Box 304, Rockford, Ill.
- 1913 Williams, B. F., M. D., Superintendent Nebraska Hospital for Insane, Lincoln, Neb.
- 1906 Williams, Berthold A., M. D., Senior Resident Physician, Cincinnati Sanitarium, College Hill, Ohio.
- 1904 Williams, G. H., M. D., Assistant Physician Columbus State Hospital, Columbus, Ohio.
- 1912 Williams, Harry D., M. D., Assistant Physician New Jersey State Hospital, Trenton, N. J. (*Associate.*)
- 1910 Williams, Tom A., M. D., 1705 N St., N. W., Washington, D. C.
- 1884 Williamson, Alonzo P., M. D., 842 N. Second St., Santa Monica, Cal.
- 1888 Wilsey, O. J., M. D., Physician-in-Charge Long Island Home, Amityville, N. Y.
- 1914 Wilson, Anita A., M. D., Government Hospital for Insane, Washington, D. C. (*Associate.*)
- 1910 Wilson, William T., M. D., Superintendent Hospital for the Insane, Penetanguishene, Ont.
- 1907 Winterode, Robert P., M. D., Superintendent Crownsville State Hospital, Crownsville, Md.
- 1912 Wiseman, John I., M. D., Assistant Physician Boston State Hospital, Dorchester Centre, Mass. (*Associate.*)
- 1913 Wiswall, Edward H., M. D., Proprietor Wellesley Nervine, Wellesley, Mass.
- 1895 Witte, M. E., M. D., Medical Superintendent Clarinda State Hospital, Clarinda, Ia.
- 1902 Wolfe, Mary Moore, M. D., 29 S. 3d St., Lewisburg, Pa.
- 1913 Wolff, George B., M. D., Clinical Assistant Sheppard and Enoch Pratt Hospital, Towson, Md. (*Associate.*)



- 1913 Wood, H. Walton, M. D., Bournewood Hospital, Brookline, Mass.
- 1910 Woodbury, Frank, M. D., Secretary Committee on Lunacy State of Pennsylvania, 717 Bulletin Building, Philadelphia, Pa.
- 1907 Woodman, Robert C., M. D., First Assistant Physician Middletown State Homeopathic Hospital, Middletown, N. Y. (*Associate.*)
- 1890 Woodson, C. R., M. D., Dr. C. R. Woodson's Sanitarium, St. Joseph, Mo.
- 1911 Woodward, Esther S. B., M. D., Assistant Physician Norwich State Hospital, Norwich, Conn. (*Associate.*)
- 1906 Worcester, Samuel, M. D., Assistant Superintendent Dr. Wadsworth's Sanitarium, Moss Hill Villa, South Norwalk, Conn.
- 1901 Work, Hubert, M. D., Superintendent Woodcroft Hospital for Nervous Diseases, Pueblo, Col. (*President, 1912.*)
- 1893 Wright, W. E., M. D., 204-206 State St., Harrisburg, Pa. (*Associate.*)
- 1912 Wright, Wm. W., M. D., Psychiatric Institute, Ward's Island, New York, N. Y. (*Associate.*)

## Y

- 1912 Yarbrough, Y. H., M. D., Assistant Physician Georgia State Sanitarium, Milledgeville, Ga. (*Associate.*)
- 1907 Yeaman, Malcolm H., M. D., Beechurst Sanitarium, Louisville, Ky.
- 1894 Yellowlees, David, M. D., L.R.C.S., Edin., F.F.P.S. and LL.D., Glasgow (formerly Physician Superintendent Glasgow Royal Asylum, Gartnavel), 6 Albert Gate, Dowanhill, Glasgow, Scotland. (*Honorary.*)
- 1912 Yeretzian, K. H., M. D., Assistant Physician Columbus State Hospital, Columbus, O. (*Associate.*)
- 1906 Young, David, M. D. (formerly Superintendent Asylum for the Insane, Selkirk, Manitoba, Canada), 494 Camden Place, Winnipeg, Manitoba, Canada.
- 1914 Young, Hugh Hampton, M. D., President State Lunacy Commission of Maryland, 330 N. Charles St., Baltimore, Md. (*Honorary.*)
- 1906 Youngling, George S., M. D., Consulting Physician Central Islip State Hospital, 453 West 34th St., New York, N. Y.
- 1913 Yule, Lorne W., M. D., Assistant Physician Northern Hospital for Insane, Logansport, Ind. (*Associate.*)

## Z

- 1906 Zeller, George A., M. D., Alienist State Board of Administration, Peoria, Ill.

### LIFE MEMBERS

---

- 1883 Charles P. Bancroft, M. D., Concord, N. H.  
1883 Sanger Brown, M. D., Kenilworth, Ill.  
1880 Walter Channing, M. D., Brookline, Mass.  
1867 John B. Chapin, M. D., Canandaigua, N. Y.  
1883 Robert H. Chase, M. D., Philadelphia, Pa.  
1881 Edward Cowles, M. D., Plymouth, Mass.  
1883 Charles G. Hill, M. D., Baltimore, Md.  
1883 Gerahom H. Hill, M. D., Des Moines, Ia.  
1867 Charles H. Hughes, M. D., St. Louis, Mo.  
1879 Henry M. Hurd, M. D., Baltimore, Md.  
1872 Theodore H. Kellogg, M. D., New York, N. Y.  
1882 Shailer E. Lawton, M. D., Brattleboro, Vt.  
1882 Samuel B. Lyon, M. D., White Plains, N. Y.  
1874 Carlos F. MacDonald, M. D., New York, N. Y.  
1879 Hosea M. Quinby, M. D., Worcester, Mass.  
1884 Henry R. Stedman, M. D., Brookline, Mass.  
1884 Alonzo P. Williamson, M. D., Santa Monica, Cal.

## HONORARY MEMBERS

- 1890 Henry M. Bannister, M. D., Evanston, Ill.  
 1898 James M. Buckley, D. D., LL. D., Morristown, N. J.  
 1881 T. S. Clouston, M. D., F. R. C. P., F. R. S. E., Edinburgh, Scotland.  
 1908 Shepherd I. Franz, A. B., Ph. D., Washington, D. C.  
 1891 G. Stanley Hall, Ph. D., LL. D., Worcester, Mass.  
 1899 Henry Hun, M. D., Albany, N. Y.  
 1896 Jules Morel, M. D., Ghent, Belgium.  
 1881 A. Motet, M. D., Paris, France.  
 1894 A. Victor Parant, M. D., Toulouse, France.  
 1896 Emmanuel Régis, M. D., Bordeaux, France.  
 1899 Antoine Ritti, M. D., Charenton, près Paris, France.  
 1897 René Semelaigne, M. D., Paris, France.  
 1885 Stephen Smith, M. D., New York, N. Y.  
 1899 James Beveridge Spence, M. D., R. U. I. M. Ch., Burntwood, England.  
 1881 A Tamburini M. D., Reggio-Emilia, Italy.  
 1902 Edouard Toulouse, M. D., Villejuif, France.  
 1899 Alexander R. Urquhart, M. D., F. R. C. P. E., Perth, Scotland.  
 1894 David Yellowlees, M. D., F. F. P. S., LL. D., Glasgow, Scotland.  
 1914 Hugh Hampton Young, M. D., Baltimore, Md.

### Total Membership:

Active .....	457
Associate .....	289
Life .....	17
Honorary .....	19
<b>Total .....</b>	<b>782</b>

The following tabulation shows the membership of the Association for the past decade:

Members	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
Active.....	273	286	307	325	339	337	360	398	457	457
Associate.....	126	109	119	117	134	134	133	203	250	289
Life.....										17
Honorary.....	22	24	24	24	24	22	21	20	19	19
<b>Total.....</b>	<b>421</b>	<b>419</b>	<b>450</b>	<b>466</b>	<b>497</b>	<b>493</b>	<b>514</b>	<b>621</b>	<b>726</b>	<b>782</b>

NOTE.—It will be observed that the list of members as here printed shows the date when each member became identified with the Association. This arrangement is believed to be a valuable addition to the list which will be appreciated.

## MORTUARY

- John A. Beauchamp, M. D., Nashville, Tenn. Died Feb. 27, 1910.  
James Rutherford, M. D., Dumfries, Scotland. Died Mar. 8, 1910.  
O. M. Dewing, M. D., Brooklyn, N. Y. Died Mar. 14, 1910.  
Bigelow T. Sanborn, M. D., Augusta, Me. Died Apr. 18, 1910.  
James B. Ayer, M. D., Boston, Mass. Died May 14, 1910.  
Louis C. Pettit, M. D., New York, N. Y. Died June 10, 1910.  
Dwight R. Burrell, M. D., Canandaigua, N. Y. Died June 18, 1910.  
George F. Cook, M. D., Oxford, Ohio. Died Sept. 21, 1910.  
William P. Letchworth, LL. D., Castile, N. Y. Died Dec. 1, 1910.  
Presley C. Hunt, M. D., Washington, D. C. Died Dec. 15, 1910.  
Uranus O. Wingate, M. D., Milwaukee, Wis. Died February 18, 1911.  
I. W. Blackburn, M. D., Washington, D. C. Died June 18, 1911.  
A. J. Lyons, M. D., Spencer, W. Va. Died June 1, 1911.  
J. Elvin Courtney, M. D., Denver, Col. Died June 22, 1911.  
J. N. Whitaker, M. D., Milledgeville, Ga. Died August 11, 1911.  
Robert E. Doran, M. D., Brooklyn, N. Y. Died Sept. 23, 1911.  
George F. Jelly, M. D., Boston, Mass. Died Oct. 24, 1911.  
D. R. Wallace, M. D., Waco, Tex. Died Nov. 22, 1911.  
Merritt B. Campbell, M. D., Heber, Cal. Died Dec. 1, 1911.  
James McKee, M. D., Raleigh, N. C. Died January 10, 1912.  
Morris S. Guth, M. D., Erie, Pa. Died March 27, 1912.  
Horace W. Eggleston, M. D., Binghamton, N. Y. Died April 11, 1912.  
Thomas J. Mitchell, M. D., Jackson, Miss. Died Sept. 16, 1912.  
Daniel Clark, M. D., Toronto, Ont. Died Sept., 1912.  
George H. Knight, M. D., Lakeville, Conn. Died Oct. 4, 1912.  
George C. Crandall, M. D., St. Louis, Mo. Died Dec. 5, 1912.  
Henry S. Upson, M. D., Cleveland, O. Died April 23, 1913.  
H. A. Tomlinson, M. D., Willmar, Minn. Died May 30, 1913.  
E. H. Pomeroy, M. D., Bradentown, Fla. Died June 22, 1913.  
S. Weir Mitchell, M. D., Philadelphia, Pa. Died Jan. 4, 1914.  
Edward W. King, M. D., San Francisco, Cal. Died Jan. 11, 1914.  
Thomas J. Moher, M. D., Cobourg, Ont. Died Feb. 24, 1914.  
Ralph L. Parsons, M. D., Ossining, N. Y. Died Feb. 26, 1914.  
George Smith Adams, M. D., Stamford, Ct. Died March 16, 1914.  
R. J. Dysart, M. D., Winnebago, Wis. Died May 26, 1914.  
Brooks F. Beebe, M. D., Cincinnati, O. Died May 29, 1914.  
Wm. B. Moseley, M. D., Brooklyn, N. Y. Died June 26, 1914.  
Samuel F. Mellen, M. D., Poughkeepsie, N. Y. Died July 15, 1914.  
Oscar R. Long, M. D., Ionia, Mich. Died Sept. 9, 1914.  
Wealey Mills, M. D., Montreal, Que. Died 1915.

## RESIGNATIONS

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Harry Lee Barnes, M. D., Wallum Lake, R. I.  
James R. Bolton, M. D., Fishkill-on-Hudson, N. Y.  
George V. N. Dearborn, M. D., Boston, Mass.  
Hugh H. Dorr, M. D., Batesville, O.  
Charles A. Drew, M. D., Worcester, Mass.  
Bernard Feldstein, M. D., Kings Park, N. Y.  
Charles M. Franklin, M. D., Baltimore, Md.  
Frank R. Fry, M. D., St. Louis, Mo.  
S. Adolphus Knopf, M. D., New York, N. Y.  
John J. Mac Phee, M. D., New York, N. Y.  
Elizabeth Spencer McCall, M. D., Bryn Mawr, Pa.  
John Punton, M. D., Kansas City, Mo.  
Arthur E. Simonis, M. D., Pennhurst, Pa.  
W. A. Taylor, M. D., Trenton, N. J.

## PRESIDENTS OF THE ASSOCIATION

---

Samuel B. Woodward, M. D., Worcester, Mass.....	1844-1848
William W. Awt, M. D., Columbus, Ohio.....	1848-1851
Luther V. Bell, M. D., Somerville, Mass.....	1851-1855
Isaac Ray, M. D., Providence, R. I.....	1855-1859
Andrew McFarland, M. D., Concord, N. H.....	1859-1862
Thomas S. Kirkbride, M. D., Philadelphia, Pa.....	1862-1870
John S. Butler, M. D., Hartford, Ct.....	1870-1873
Charles H. Nichols, M. D., Bloomingdale, N. Y.....	1873-1879
Clement A. Walker, M. D., Boston, Mass.....	1879-1882
John H. Callender, M. D., Nashville, Tenn.....	1882-1883
John P. Gray, M. D., Utica, N. Y.....	1883-1884
Pliny Earle, M. D., Northampton, Mass.....	1884-1885
Orpheus Everts, M. D., Cincinnati, Ohio.....	1885-1886
H. H. Buttolph, M. D., Short Hills, N. J.....	1886-1887
Eugene Grissom, M. D., Raleigh, N. C.....	1887-1888
John B. Chapin, M. D., Philadelphia, Pa.....	1888-1889
W. W. Godding, M. D., Washington, D. C.....	1889-1890
H. P. Stearns, M. D., Hartford, Ct.....	1890-1891
Daniel Clark, M. D., Toronto, Canada.....	1891-1892
J. B. Andrews, M. D., Buffalo, N. Y.....	1892-1893
John Curwen, M. D., Warren, Pa.....	1893-1894
Edward Cowles, M. D., Somerville, Mass.....	1894-1895
Richard Dewey, M. D., Wauwatosa, Wis.....	1895-1896
Theophilus O. Powell, M. D., Milledgeville, Ga.....	1896-1897
Richard M. Bucke, M. D., London, Ontario.....	1897-1898
Henry M. Hurd, M. D., Baltimore, Md.....	1898-1899
Joseph G. Rogers, M. D., Logansport, Ind.....	1899-1900
Peter M. Wise, M. D., New York, N. Y.....	1900-1901
Robert J. Preston, M. D., Marion, Va.....	1901-1902
G. Alder Blumer, M. D., Providence, R. I.....	1902-1903
A. B. Richardson, M. D., Washington, D. C. } ..(died before taking office)	
A. E. Macdonald, M. D., New York, N. Y. } ..(died before taking office)	
T. J. W. Burgess, M. D., Montreal, Canada.....	1903-1904
C. B. Burr, M. D., Flint, Mich.....	1904-1905
Charles G. Hill, M. D., Baltimore, Md.....	1905-1906
Charles P. Bancroft, M. D., Concord, N. H.....	1906-1907
Arthur F. Kilbourne, M. D., Rochester, Minn.....	1907-1908
William F. Drewry, M. D., Petersburg, Va.....	1908-1909
Charles W. Pilgrim, M. D., Poughkeepsie, N. Y.....	1909-1910
Hubert Work, M. D., Pueblo, Col.....	1910-1911
James T. Searcy, M. D., Tuscaloosa, Ala.....	1911-1912
Carlos F. MacDonald, M. D., New York, N. Y.....	1912-1913
Samuel E. Smith, M. D., Richmond, Ind.....	1913-1914
	1914-1915

### SECRETARIES OF THE ASSOCIATION

---

Thomas S. Kirkbride, M. D., Philadelphia, Pa.....	1844-1852
H. H. Buttolph, M. D., Short Hills, N. J.....	1852-1854
Charles H. Nichols, M. D., Washington, D. C.....	1854-1858
John Curwen, M. D., Warren, Pa.....	1858-1893
Henry M. Hurd, M. D., Baltimore, Md.....	1893-1897
C. B. Burr, M. D., Flint, Mich.....	1897-1904
E. C. Dent, M. D., New York, N. Y.....	1904-1906
Charles W. Pilgrim, M. D., Poughkeepsie, N. Y.....	1906-1909
Charles G. Wagner, M. D., Binghamton, N. Y.....	1909-

# MEETING PLACES OF ASSOCIATION OF MEDICAL SUPERINTENDENTS OF AMERICAN IN- STITUTIONS FOR THE INSANE

1st 1844 Philadelphia, Pa., Jones Hotel, Oct. 16, 1844. Pres., Dr. Samuel B. Woodward. Vice-Pres., Dr. Samuel White. Sec.-Treas., Dr. Thomas S. Kirkbride.	34th 1880 Philadelphia, Pa.
1845 No meeting held.	35th 1881 Toronto, Ont.
2d 1846 Washington, D. C.	36th 1882 Cincinnati, Ohio.
1847 No meeting held.	37th 1883 Newport, R. I.
3d 1848 New York, N. Y.	38th 1884 Philadelphia, Pa.
4th 1849 Utica, N. Y.	39th 1885 Saratoga, N. Y.
5th 1850 Boston, Mass.	40th 1886 Lexington, Ky.
6th 1851 Philadelphia, Pa.	41st 1887 Detroit, Mich.
7th 1852 New York, N. Y.	42d 1888 Fortress Monroe, Va.
8th 1853 Baltimore, Md.	43d 1889 Newport, R. I.
9th 1854 Washington, D. C.	44th 1890 Niagara Falls, N. Y.
10th 1855 Boston, Mass.	45th 1891 Washington, D. C.
11th 1856 Cincinnati, Ohio.	46th 1892 Washington, D. C.
12th 1857 New York, N. Y.	New constitution adopted.
13th 1858 Quebec, Que.	Name changed to American Medico-Psychological Ass'n.
14th 1859 Lexington, Ky.	47th 1893 Chicago, Ill.
15th 1860 Philadelphia, Pa.	50th 1894 Philadelphia, Pa.
1861 No meeting held on ac- count of the disturb- ed condition of the country.	Fiftieth year since foundation. Semi-centennial. Number of meetings changed. Proceedings published in separ- ate volume.
16th 1862 Providence, R. I.	51st 1895 Denver, Col.
17th 1863 New York, N. Y.	52d 1896 Boston, Mass.
18th 1864 Washington, D. C.	53d 1897 Baltimore, Md.
19th 1865 Pittsburgh, Pa.	54th 1898 St. Louis, Mo.
20th 1866 Washington, D. C.	55th 1899 New York, N. Y.
21st 1867 Philadelphia, Pa.	56th 1900 Richmond, Va.
22d 1868 Boston, Mass.	57th 1901 Milwaukee, Wis.
23d 1869 Staunton, Va.	58th 1902 Montreal, Que.
24th 1870 Hartford, Conn.	59th 1903 Washington, D. C.
25th 1871 Toronto, Ont.	60th 1904 St. Louis, Mo.
26th 1872 Madison, Wis.	61st 1905 San Antonio, Tex.
27th 1873 Baltimore, Md.	62d 1906 Boston, Mass.
28th 1874 Nashville, Tenn.	63d 1907 Washington, D. C.
29th 1875 Auburn, N. Y.	64th 1908 Cincinnati, Ohio.
30th 1876 Philadelphia, Pa.	65th 1909 Atlantic City, N. J.
31st 1877 St. Louis, Mo.	66th 1910 Washington, D. C.
32d 1878 Washington, D. C.	67th 1911 Denver, Col.
33d 1879 Providence, R. I.	68th 1912 Atlantic City, N. J.
	69th 1913 Niagara Falls, Ont.
	70th 1914 Baltimore, Md.
	71st 1915 Fortress Monroe, Va.



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**CAMDEN COUNTY HOSPITAL FOR INSANE, BLACKWOOD.**

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**FAIR OAKS SANATORIUM, SUMMIT.**

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Ross McC. Chapman, M. D., Senior Assistant Physician.  
Wm. J. Tiffany, M. D., Senior Assistant Physician.  
Eloise Walker, M. D., Woman Physician.  
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Christopher Fletcher, M. D., Senior Assistant Physician.  
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Geoffrey C. H. Burns, M. D., Senior Assistant Physician.  
Horatio G. Gibson, Jr., Senior Assistant Physician.  
Milton M. Grover, M. D.  
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Calvin B. West, M. D., Senior Assistant Physician.  
Nell W. Bartram, M. D., Assistant Physician.  
Charles G. McGaffin, M. D., Pathologist and Assistant Physician.  
Russell E. Blaisdell, M. D., Assistant Physician.  
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Delmer D. Durgin, M. D., Assistant Physician.  
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Gordon Priestman, M. D., Assistant Physician.

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 Frederick Peterson, M. D., New York.  
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Wm. A. Murphy, M. D., Assistant Physician.

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Albert Durham, M. D., Charlotte.

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H. D. Earl, M. D., First Assistant Physician.

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Bruce B. Barber, M. D., Assistant Physician.  
Mary Keyt Isham, M. D., Assistant Physician.  
George A. Rowland, M. D., Assistant Physician.  
K. H. Yeretzian, M. D., Assistant Physician.

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No members.

**DAYTON STATE HOSPITAL, DAYTON.**

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Chas. B. Rogers, M. D., Physician-in-Charge.  
H. Irving Cosad, M. D., Clinical Director.

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Thomas A. Ratliff, M. D.

**INSTITUTION FOR FEEBLE-MINDED, COLUMBUS.**

E. J. Emerick, M. D., Superintendent.

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Marian O'Hartow, M. D.

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No members.

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**STATE ASYLUM FOR THE CHRONIC INSANE, WERNERSVILLE.**

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James S. Hammers, M. D., Assistant Physician.

E. B. Shellenberger, M. D., Assistant Physician.

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H. C. Podall, M. D., Assistant Physician.

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**STATE INSTITUTION FOR FEEBLE-MINDED, SPRING CITY.**

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Harry F. Hoffman, M. D., Assistant Superintendent.

Walter E. Lang, M. D., Senior Assistant Physician.

**PENNSYLVANIA—Continued.****STATE LUNATIC HOSPITAL, HARRISBURG.****H. L. Orth, M. D., Superintendent.****R. F. L. Ridgway, M. D., First Assistant Physician.****STONYHURST SANITARIUM, HOLMESBURG, PHILADELPHIA.**

No members.

**WOOD LEA SANITARIUM, ARDMORE.****Grace E. White, M. D.****"THE EYRIE," CLIFTON HEIGHTS.****W. W. Hawke, M. D.****Jane Rogers Baker, M. D., West Chester.****Charles W. Burr, M. D., Philadelphia.****Alfred Gordon, M. D., Philadelphia.****Seymour De Witt Ludlum, M. D., Merion.****D. J. McCarthy, M. D., Philadelphia.****Clyde R. McKinniss, M. D., Boyce Station.****Edward E. Mayer, M. D., Pittsburgh.****Charles K. Mills, M. D., Philadelphia.****Horace Phillips, M. D., Philadelphia.****Albert R. Moulton, M. D., Philadelphia.****John H. W. Rhein, M. D., Philadelphia.****Robert A. Stewart, M. D., Lock Haven.****T. H. Weisenburg, M. D., Philadelphia.****Cornelius C. Wholey, M. D., Pittsburgh.****Mary M. Wolfe, M. D., Lewisburg.****Frank Woodbury, M. D., Philadelphia.****W. E. Wright, M. D., Harrisburg.****R****RHODE ISLAND—BUTLER HOSPITAL, PROVIDENCE.****G. Alder Blumer, M. D., Superintendent.****Henry C. Hall, M. D., Assistant Physician.****Arthur H. Ruggles, M. D., Assistant Physician.****RHODE ISLAND STATE SANATORIUM, WALLUM LAKE.**

No members.

**STATE HOSPITAL FOR INSANE, HOWARD.****Arthur H. Harrington, M. D., Superintendent.****E. H. Cohoon, M. D., Assistant Physician.****Joseph H. Toomey, M. D., Assistant Physician.****William McDonald, M. D., Providence.**



## S

**SOUTH CAROLINA—STATE HOSPITAL FOR THE INSANE, COLUMBIA.**

J. L. Thompson, M. D., Assistant Physician.

WAVERLEY SANITARIUM, COLUMBIA.

J. W. Babcock, M. D., Superintendent.

Eleanora B. Saunders, M. D.

**SOUTH DAKOTA—SOUTH DAKOTA HOSPITAL FOR THE INSANE, YANKTON**

L. C. Mead, M. D., Superintendent.

George Sheldon Adams, M. D., Assistant Superintendent.

ASYLUM FOR INSANE INDIANS, CANTON.

Henry R. Hummer, M. D., Superintendent.

## T

**TENNESSEE—CENTRAL HOSPITAL FOR THE INSANE, NASHVILLE.**

Albert E. Douglas, M. D., Superintendent.

George E. Hatcher, M. D., First Assistant Physician.

EASTERN HOSPITAL FOR THE INSANE, BEARDEN.

Michael Campbell, M. D., Superintendent.

WESTERN HOSPITAL FOR INSANE, BOLIVAR.

James J. Neely, M. D., Superintendent.

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Wm. G. Somerville, M. D., Memphis.**TEXAS—ARLINGTON HEIGHTS SANITARIUM, FORT WORTH.**

W. F. Allison, M. D., Superintendent.

DR. MOODY'S SANITARIUM, SAN ANTONIO.

G. H. Moody, M. D., Superintendent.

NORTH TEXAS HOSPITAL FOR THE INSANE, TERRELL.

No members.

SOUTHWESTERN INSANE ASYLUM, SAN ANTONIO.

F. S. White, M. D., Superintendent.

STATE EPILEPTIC COLONY, ABILENE.

T. B. Bass, M. D., Superintendent.

STATE LUNATIC ASYLUM, AUSTIN.

John Preston, M. D., Superintendent.

TEXAS SCHOOL FOR DEFECTIVES, AUSTIN.

A. Fitzhugh Beverly, M. D., Resident Physician.

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John S. Turner, M. D., Dallas.

## U

**UTAH—UTAH STATE MENTAL HOSPITAL, PROVO CITY.**

Daniel H. Calder, M. D., Superintendent.

## V

**VERMONT—BRATTLEBORO RETREAT, BRATTLEBORO.**

Shailer E. Lawton, M. D., Superintendent.

Herbert W. Taylor, M. D., First Assistant Physician.

**STATE HOSPITAL FOR THE INSANE, WATERBURY.**

No members.

**VIRGINIA—CENTRAL STATE HOSPITAL, PETERSBURG.**

William F. Drewry, M. D., Superintendent.

Hugh Carter Henry, M. D., First Assistant Physician.

**EASTERN STATE HOSPITAL, WILLIAMSBURG.**

G. W. Brown, M. D., Superintendent.

**SOUTHWESTERN STATE HOSPITAL, MARION.**

John C. King, M. D., Superintendent.

Estelle H. Henderson, M. D., First Assistant Physician.

**STATE EPILEPTIC COLONY, MADISON HEIGHTS.**

A. S. Priddy, M. D., Superintendent.

**WESTERN STATE HOSPITAL, STAUNTON.**

J. S. De Jarnette, M. D., Superintendent.

J. H. Garlick, M. D., Assistant Physician.

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Oliver C. Brunk, M. D., Richmond.

## W

**WASHINGTON—EASTERN WASHINGTON HOSPITAL FOR THE INSANE, MEDICAL LAKE.**

John M. Semple, M. D., Superintendent.

**WESTERN WASHINGTON HOSPITAL FOR THE INSANE, FORT STELLACOOM.**

No members.

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Robert P. Smith, M. D., Seattle.**WEST VIRGINIA—SECOND HOSPITAL FOR THE INSANE, SPENCER.**

Charles A. Barlow, M. D., Superintendent.

**WEST VIRGINIA ASYLUM AT HUNTINGTON, HUNTINGTON.**

L. V. Guthrie, M. D., Superintendent.

James R. Bloss, M. D., Assistant Physician.

Harry W. Keatley, M. D., Assistant Physician.

**WEST VIRGINIA HOSPITAL FOR THE INSANE AT WESTON.**

No members.

**WISCONSIN—LAKE GENEVA SANITARIUM, LAKE GENEVA.**

No members.

**MILWAUKEE ASYLUM FOR THE CHRONIC INSANE, WAUWATOSA.**

William F. Beutler, M. D., Superintendent.

**WISCONSIN—Continued.****MILWAUKEE HOSPITAL FOR THE INSANE, WAUWATOSA.****M. J. White, M. D., Superintendent.****MILWAUKEE SANITARIUM, WAUWATOSA.****Richard Dewey, M. D., Physician-in-Charge.****Herbert Wm. Powers, M. D.****NORTHERN HOSPITAL FOR THE INSANE, WINNEBAGO.****Adin Sherman, M. D., Superintendent.****OAK LEIGH SANITARIUM, LAKE GENEVA.****Mary E. Pogue, M. D., Physician-in-Charge.****OCONOMAWOC HEALTH RESORT, OCONOMAWOC.****Arthur W. Rogers, M. D., Superintendent.****PALMYRA SANITARIUM, PALMYRA.****No members.****THE SANATORIUM, HUDSON.****W. H. Darling, M. D., Superintendent.****WAUKESHA SPRINGS SANITARIUM, WAUKESHA.****Byron M. Caples, M. D., Superintendent.****WISCONSIN STATE HOSPITAL FOR THE INSANE, MENDOTA.****Charles Gorst, M. D., Superintendent.****William F. Lorenz, M. D., First Assistant Physician.**

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**William F. Becker, M. D., Milwaukee.****Anne Burnet, M. D., Wausau.****John B. Edwards, M. D., Milwaukee.****Roy E. Mitchell, M. D., Eau Claire.****S. S. Stack, M. D., Milwaukee.****WYOMING—STATE HOSPITAL FOR THE INSANE, EVANSTON.****Charles H. Solier, M. D., Superintendent.****BRITISH AMERICA.****BRITISH COLUMBIA—PUBLIC HOSPITAL FOR INSANE, NEW WESTMINSTER.****Charles Edward Doherty, M. D., Superintendent.****James G. McKay, M. D., Assistant Physician.****MANITOBA—ASYLUM FOR THE INSANE, SELKIRK.****H. C. Norquay, M. D., Assistant Superintendent.**

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**David Young, M. D., Winnipeg.****NEW BRUNSWICK—THE PROVINCIAL HOSPITAL, FAIRVILLE, ST. JOHN'S COUNTY.****James V. Anglin, M. D., Superintendent.**

**NEWFOUNDLAND—ASYLUM FOR THE INSANE, ST. JOHN'S.**  
No members.

**NOVA SCOTIA—NOVA SCOTIA HOSPITAL, HALIFAX.**  
Frederick E. Lawlor, M. D., Superintendent.

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W. H. Hattie, M. D., Halifax.

**ONTARIO—ASYLUM FOR THE INSANE, COBourg.**  
No members.

**ASYLUM FOR THE INSANE, LONDON.**  
W. J. Robinson, M. D., Superintendent.

**ASYLUM FOR THE INSANE, PENETANGUISHENE.**  
William T. Wilson, M. D., Superintendent.

**HOMEWOOD SANITARIUM, GUELPH.**  
Alfred T. Hobbs, M. D., Superintendent.  
E. C. Barnes, M. D., Assistant Physician.

**HOSPITAL FOR THE INSANE, BROCKVILLE.**  
John C. Mitchell, M. D., Superintendent.

**HOSPITAL FOR THE INSANE, HAMILTON.**  
W. M. English, M. D., Superintendent.  
Peter MacNaughton, M. D., Assistant Superintendent.

**HOSPITAL FOR THE INSANE, TORONTO.**  
James M. Forster, M. D., Superintendent.

**MIMICO HOSPITAL FOR THE INSANE, TORONTO.**  
Nelson H. Beemer, M. D., Superintendent.

**DR. MEYERS' HOSPITAL, TORONTO.**  
Donald Campbell Meyers, M. D., Superintendent.

**ROCKWOOD HOSPITAL FOR THE INSANE, KINGSTON.**  
Edward Ryan, M. D., Superintendent.

**SIMCOE HALL, BARRIE.**  
W. C. Barber, M. D., Superintendent.

**TORONTO GENERAL HOSPITAL, TORONTO.**  
Charles K. Clarke, M. D., Medical Superintendent.

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R. W. Bruce Smith, M. D., Toronto.

**PRINCE EDWARD ISLAND—FALCONWOOD HOSPITAL FOR INSANE, CHAR-  
LOTTETOWN.**

V. L. Goodwill, M. D., Superintendent.

**QUEBEC—BEAUFORT ASYLUM FOR THE INSANE, BEAUFORT, QUEBEC.**  
M. D. Brochu, M. D., Superintendent.

**SAINT JEAN DE DIEU HOSPITAL, MONTREAL.**  
George Villeneuve, M. D., Superintendent.  
Francis E. Devlin, M. D., Assistant Superintendent.

**QUEBEC—Continued.****PROTESTANT HOSPITAL FOR THE INSANE, MONTREAL.****T. J. W. Burgess, M. D., Superintendent.****Carlyle A. Porteous, M. D., Assistant Superintendent.****Andrew Macphail, M. D., Consulting Pathologist.****David Alexander Shirres, M. D., Consulting Neurologist.****Hedley V. Robinson, M. D., Assistant Physician.**

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**E. Philippe Chagnon, M. D., Montreal.****CUBA.—MALBERTI'S SANITARIUM, HAVANA.****José A. Malberti, M. D., Physician-in-Charge.****PORTO RICO.—INSANE ASYLUM, SAN JUAN.****No members.**

# AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION.

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## CONSTITUTION.

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### ARTICLE I.

This organization shall be known as the AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION, this name being adopted in 1892 by "The Association of Medical Superintendents of American Institutions for the Insane," founded in 1844.

### ARTICLE II.

The object of this Association shall be the study of all subjects pertaining to mental disease, including the care, treatment, and promotion of the best interests of the insane.

### ARTICLE III.

There shall be five classes of members: (1) Active members, who shall be physicians, resident in the United States and British America, especially interested in the treatment of insanity; (2) Associate members; (3) Life members; (4) Honorary members; and (5) Corresponding members.

### ARTICLE IV.

The officers of the Association shall consist of a President, Vice-President, Secretary—who shall also be the Treasurer—three Auditors, and twelve other members of the Association to be called Councilors; all of these officers together shall constitute a body which shall be known as the Council.

**NOTE.**—The Association of Medical Superintendents of American Institutions for the Insane was founded in 1844 by the original thirteen members. In 1891, when its membership had increased to more than two hundred, it was proposed, at the annual meeting of that year in Washington, to form a better organization of the Association—its work having previously been done under the somewhat unstable rules of custom and a few resolutions scattered through its records. The proposition was agreed to, and at the annual meeting in Washington, in 1892, there were unanimously adopted the following Constitution and By-Laws, with the change of name to the AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION.

## ARTICLE V.

The Active members of the Association shall include all past and present medical superintendents named in the official list published for 1892 of members of "The Association of Medical Superintendents of American Institutions for the Insane"; the Life members shall be such Active members as shall have been members of the Association for a consecutive period of thirty (30) years; the Honorary members shall include those so designated in that list; the Associate members shall include all the assistant physicians named in the same list; it being provided that said list shall be corrected by the Council, as may be necessary to carry out the intention of the Constitution as to the continuance of existing membership.

Every candidate for admission to the Association hereafter as an Active member shall be proposed to the Council, in writing, in an application addressed to the President, at any annual meeting preceding the one at which the election is held. Honorary, Associate, or Corresponding members shall be proposed to the Council, in writing, in an application addressed to the President, at least two months prior to the meeting of the Association. Every application of whatever class must include a statement of the candidate's name and residence, professional qualifications, and any appointments then or formerly held, and certifying that he is a fit and proper person for membership. In the case of a candidate for Active or Associate membership, the application shall be signed by three Active members of the Association; and by six Active members for the proposal of an Honorary or Corresponding member. The names of all candidates approved by a majority vote of members of the Council present at its annual meeting shall be presented on a written or printed ballot to the Association at its concurrent annual meeting, at least one session previous to that at which the election is made, which shall be by ballot at a regular session, and require a majority vote of the members present. Physicians who, by their professional work or published writings, have shown a special interest in the care and welfare of the insane, are eligible to Active membership. The only persons eligible for Associate membership are regularly appointed assistant physicians of institutions for the insane that are regarded to be properly such by the Council; and they are eligible for such membership only during the time they are hold-

ing such appointments. After holding such an appointment three years, an Associate member may become an Active member by making application, in writing, to the Council, and upon its approval, being elected in the manner heretofore prescribed.

#### ARTICLE VI.

Physicians and others who have distinguished themselves by their attainments in branches of science connected with insanity, or who have rendered signal service in philanthropic efforts to promote the interests of the insane, shall be eligible for Honorary membership.

Physicians not residents in the United States and British America, who are actively engaged in the treatment of insanity, may be elected Corresponding members.

Active members only shall be entitled to a vote at any meeting, or be eligible to any office. Life, Honorary and Corresponding members shall be exempt from all payments of annual dues to the Association.

#### ARTICLE VII.

Any member of the Association may withdraw from it on signifying his desire to do so in writing to the Secretary: *Provided*, That he shall have paid all his dues to the Association. Any member who shall fail for three successive years to pay his dues after special notice by the Treasurer shall be regarded as having resigned his membership, unless such dues shall have been remitted by the Council for good and sufficient reasons.

Any member who shall be declared unfit for membership by a two-thirds vote of the members of the Council present at an annual meeting of that body shall have his name presented by it for the action of the Association from which he shall be dismissed if it be so voted by two-thirds of the members present at its annual meeting.

#### ARTICLE VIII.

The Officers and Councilors shall be elected at each annual meeting. They shall be nominated to the Association on the second day of the annual meeting in the order of business of the first session of that day, by a committee appointed for that purpose by the President; and the election shall take place immedi-



ately. The election shall be made as the meeting may determine, and the person who shall have received the highest number of votes shall be declared elected to the office for which he has been nominated.

The President, Vice-President, the Secretary and Treasurer, and Auditors shall hold office for one year or until the beginning of the term for which their successors are elected. One Auditor shall be elected for one year, one for two years, and one for three years. The Secretary and Treasurer and one Auditor are eligible for re-election. At the first election of Councilors, four members shall be elected for one year, four for two years, and four for three years; and thereafter four members shall be elected each year to hold office three years, or until their successors are elected. The President, Vice-President, one Auditor, and the four retiring Councilors are ineligible for re-election to their respective offices for one year immediately following their retirement. All the Officers and Councilors shall enter upon their duties immediately after their election, excepting the President and Vice-President. When any vacancies occur in any of the offices of the Association, they shall be filled by the Council until the next annual meeting.

A quorum of the Council shall be formed by six members; and of the Association by twenty Active members.

#### ARTICLE IX.

The President and Vice-President for the year shall enter on their duties at the close of the business of the annual meeting at which they are elected. The President shall prepare an inaugural address to be delivered at the opening session of the meeting. He shall preside at all the annual or special meetings of the Association or Council, or in his absence at any time, the Vice-President shall act in his place.

The Secretary and Treasurer shall keep the records of the Association and perform all the duties usually pertaining to that office, and such other duties as may be prescribed for him by the Council; and under the same authority he shall receive and disburse and duly account for all sums of money belonging to the Association. He shall keep accurate accounts and vouchers of all his receipts and payments on behalf of the Association, and of

all invested funds, with the income and disposition thereof, that may be placed in his keeping, and shall submit these accounts, with a financial report for the preceding year, to the Council at its annual meeting. Each annual statement shall be examined by the Auditors, who shall prepare and present at each annual meeting of the Association a report showing its financial condition. The Council shall have charge of any funds in the possession of the Association, and which shall be invested under its direction and control. The Council shall keep a careful record of its proceedings, and make an annual report to the Association of matters of general interest. The Council shall also print annually the proceedings of the meetings of the Association and the reports of the Treasurer and Auditors.

The Council is empowered to manage all the affairs of the Association, subject to the Constitution and By-Laws; to appoint committees from the membership of the Association, and spend money out of its surplus funds for special scientific investigations in matters pertaining to the objects of the Association, to publish reports of such scientific investigations; to apply the income of special funds, at its discretion, to the purposes for which they were intended. The Council may also engage in the regular publication of reports, papers, transactions, and other matters, in annual volume, or in a journal, in such manner and at such times as the Council may determine, with the approval of the Association.

#### ARTICLE X.

Amendments to the Constitution and By-Laws shall be taken up for consideration at the first session of the second day of any annual meeting, and may be made by a two-thirds vote of all the members present: *Provided*, That notice of such proposed amendments be given in writing at the annual meeting next preceding. It shall be the duty of the Secretary to send to all the members a copy of any proposed amendment at least three months previous to the meeting when the action is to be taken.

## BY-LAWS.

## ARTICLE I.

The meetings of the Association shall be held annually. The time and place of each meeting shall be named by the Council, and reported to the Association for its action at the preceding meeting. Each annual meeting shall be called by printed announcements sent to each member at least three months previous to the meeting.

The Council shall hold an annual meeting concurrent with the annual meeting of the Association; and the Council shall hold as many sessions and at such times as the business of the Association may require.

Special meetings of the Council may be called by the order of the Council. The President shall have authority at any time, at his own discretion, to instruct the Secretary to call a special meeting of the Council; and he shall be required to do so upon a request signed by six members of the Council. Such special meetings shall be called by giving at least four weeks' written notice.

## ARTICLE II.

Each and every Active and Associate member shall pay an annual tax to the Treasurer, the amount to be fixed annually by the Council, not to exceed five dollars for an Active member, or two dollars for an Associate member.

## ARTICLE III.

The order of business of each annual meeting of the Association shall be determined by the Council, and shall be printed for the use of the Association at its meeting. The Council shall also make all arrangements for the meetings of the Association, appointing such auxiliary committees from its own body, or from other members of the Association, and making such other provisions as shall be requisite, at its discretion.



# NOTE.

The accompanying volume, containing the proceedings, papers, and discussions of the American Medico-Psychological Association at its Seventieth Annual Meeting, is printed by the Council with the approval of the Association.

CHARLES G. WAGNER,

*Secretary.*

BINGHAMTON, N. Y.,  
*March 1, 1915.*

# AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION.

## PROCEEDINGS OF THE SEVENTIETH ANNUAL MEETING.

BALTIMORE, MD., TUESDAY, MAY 26, 1914.—FIRST SESSION.

The Association convened at 10 a. m. in the Convention Hall of the Hotel Belvedere, Baltimore, Md., and was called to order by the President, Dr. Carlos F. MacDonald, of New York.

**THE PRESIDENT.**—*Fellow Members and Guests:* Your President deems it a great privilege and a great honor, as well as a pleasant duty, to call the Seventieth Annual Meeting of the American Medico-Psychological Association to order, and in doing so, he would say to each and every member present, as well as to our guests, welcome, welcome, thrice welcome.

A glance at our program, with its bristling array of titles of scientific papers of a high order, together with the names of their respective authors, indicates that our meeting is to be favored on the scientific side with a continuous "all-star" performance, while on the social side our efficient and industrious local committee of arrangements has set before us an equally attractive array of good things to be sandwiched in between our scientific sessions, thus sustaining Baltimore's well-known reputation for hospitality with which many of us are familiar from former experiences. I now declare the Seventieth Annual Meeting open for the transaction of business.

We will first have the pleasure of listening to the invocation by the Right Reverend John Gardner Murray, Bishop of Maryland.

The invocation was then given by Bishop Murray of Maryland.

**THE PRESIDENT.**—The Association is to be congratulated on being honored by the presence here to-day of such a galaxy of distinguished citizens of the State of Maryland, who have come to bid us welcome to Baltimore—fit representatives of a commonwealth which, in proportion to its size, has done as much, if not more, to advance the interests of psychiatry and to modernize the care and treatment of the insane than any other state in the union.

I may mention first a gentleman who comes of a long line of physicians, and who has been actively interested in the welfare of the insane in the State of Maryland, having lent the influence of his high office to the support of the officers of his state who are charged with the supervision of the institutions for the insane, upholding the hands of the State Lunacy Commission in its efforts to improve these institutions and, best of all, he has allowed politics to play no part in the administration of his office as regards the interests and welfare of the insane and feeble-minded.

I have very great pleasure in presenting the Hon. Phillips Lee Goldsborough, Governor of the State of Maryland. (Applause.)

GOVERNOR GOLDSBOROUGH.—*Mr. President, and Gentlemen of the American Medico-Psychological Association:* Allow me, on behalf of the people of Maryland to extend you a most hearty welcome to this state. If I were to attempt to give you reasons in support of the wisdom which brought about the decision to hold your Seventieth Annual Meeting in this city, I should not have a difficult task, for no one visits this fair land, sees its attractions, learns of its resources and meets its people without completely understanding that he has in truth found the real Garden of Eden; and that this statement may not be challenged, of course, I saw to the appointment of a Committee on Arrangements, the personnel of which for chivalry, courtesy, and making one have a good time, "all the way round," to use a localism, is certainly not to be excelled, and I doubt equalled; and especially is this so when I confess that the silent and advisory member of that committee is my and everybody's good and genial friend, Dr. Hugh Hampton Young. To the tender mercies of this committee I commit you, feeling convinced that they will see to it that the cares of the inner man are fully satisfied, and that the days of your visit to us shall be those of real pleasure and happiness, such, if you will pardon me for saying it, as are only found in the realms of true Southern hospitality.

Now, you must not think I am saying more than I mean—I am not—but when one sees from the program that there are to be four speeches of welcome—merely an evidence of our great happiness in having you with us—he is admonished "to put his words close together" and weigh well their meaning, else in the general result of what may be said by so many official "welcomers," the charge may be made of exaggerated promises and the expression of biased and egotistical opinions. But, be this as it may, I feel that in the end you will agree that such promises as have been made you will be wisely and honestly fulfilled.

The topics or subjects with which your Association will deal—those touching the insane and feeble-minded—may not be pleasing to think upon. Indeed, they are those of much sadness. Nevertheless, it is the duty of our people to face these problems, to discuss them, and finally, in so far as we can, find their solution. It is a pleasure to note that the citizens and taxpayers of this state have now awakened to a proper realization of the obligations resting upon them in the care of these unfortunates, and Mary-

land for some years past, under the leadership of those who make up the membership of the State Lunacy Commission, has been endeavoring, and honestly so, to provide sufficient accommodation and adequate treatment for the indigent sick and insane and feeble-minded of the state. There is a yearly increase of about 200 insane in the state, whom we are endeavoring to care for in state hospitals, and we take quite a bit of pride in our institutions known as Springfield State Hospital, located in Carroll County, Spring Grove State Hospital, located in Baltimore County, and Crownsville State Hospital, located in Anne Arundel County, the latter being exclusively for the care of colored insane. At all of these institutions are modern and up-to-date methods, the open-door system, and kind and humane treatment. There doubtless are similar institutions as well conducted as these, but somehow we feel that the belief is justified when we say that they are excelled by none. Maryland is not a rich state, but the General Assembly of the state has appropriated approximately \$2,000,000.00 in recent years for new buildings, which has enabled us to establish two new hospitals for the insane. The cost of maintenance for the year 1915 is estimated at about \$2,000,000.00; quite a tax upon a state with an income not large, not to be compared to such states as New York, Pennsylvania, Ohio, Illinois, and others that might be mentioned. Still we have a duty to discharge to this class of people, and that we are endeavoring to do fully.

It does not require any special figuring to demonstrate the enormous cost it is to the state to provide simply food and shelter for this vast army of the mental unfit. Then, certainly the most important question that we have to consider is that relating to preventive measures and using every means not only to increase the efficiency of our state institutions, but also to maintain the high standard which all desire. I conceive that it is a well recognized fact the world over that the earlier a patient suffering from any disease, whether mental or physical, comes under proper treatment, the greater is that patient's chance of recovery. It has been the custom, not alone in Maryland, but in other states, to keep a mentally afflicted person out of a hospital as long as possible, and recourse to a hospital has been had only when the patient has become dangerous to himself or friends.

The modern conception of the treatment of the insane is entirely different. Now prevention and early treatment are the requisites in all cases of insanity. It is preposterous for a layman to stand and talk on this subject to such a distinguished body as the one before me, but it is done simply as an opportunity to express my thanks to you for the magnificent work that has been done by your Association and its members in teaching us in this state, yea in all states, what our duty is in this behalf. It has been said to me that I was a Governor more largely controlled by the medical men of the state; that their influence weighed more heavily with my administration than any other class of professional or business men in the state. It may be true, I will not deny it, because of all sciences, that of medicine and surgery in the past half century has made the greatest prog-



ress. I take off my hat to you gentlemen, and I say in the words of Goethe: "Energy will do anything that can be done in the world; and no circumstances, no opportunities, will make a man without it."

You have taught us that we must have proper hospital buildings, in charge of well trained psychiatrists, with ample medical assistance, and a corps of well trained nurses; that there must be a thoroughly organized medical staff where the physicians are required to do more than simple routine work. There must be daily staff conferences concerning the patients admitted and discharged, and a well equipped medical library accessible to the staff, laboratories where investigations may be carried on, and a competent director of occupation and recreation must be on duty. We must do more than simply house, clothe and feed the insane. We must prevent insanity; we must cure whenever possible. Again, you gentlemen are teaching us how to inaugurate a movement, known as the "Preventive or Fore- and After-Care Movement." I am glad to tell you that from a private source a fund has been established in this state which has enabled its Lunacy Commission to employ a well trained psychiatrist to devote his time to this work; and it is believed his efforts will result in getting patients to hospitals early to be placed under treatment, and in removing from the hospitals patients who have sufficiently recovered their mental health to live satisfactorily, quietly and peacefully outside of the institutions; finding homes for them or returning them to their own homes, and thus relieving the state of their constant support and preventing them from ending their days in the state institutions. I stand for opening the hospitals and judiciously inviting the public to visit them more frequently, and educating the public through the social service and eugenics department and by papers or lectures read by the staffs to gatherings in the communities, as well as having visitors from the community; for thus, in my humble judgment, will these steps tend to educate the public in the right direction. These lessons your Association is implanting in the minds of the people of the nation. I have learned what little I have here said from those who have charge of this work in Maryland, members of your Association, and so strongly have they put this work before me that I have endeavored in my feeble way to have Maryland do her full duty to this unfortunate class of people found within her confines.

I thank you, gentlemen, for visiting this state and city. I know that the result of your deliberations will be of benefit to those who so sadly need it. I know full well how zealously you have striven in your profession for the uplift of the mentally afflicted of mankind, and I can only urge you to keep on, knowing full well that no mean measure of success awaits you.

I close with a proverb of King Solomon:

"Seest thou a man diligent in business? He shall stand before kings; he shall not stand before mean men." (Applause.)

**THE PRESIDENT.**—The City of Baltimore is represented here to-day by a gentleman who, among his other and varied activities in the public service, is noted for his interest in sick and suffering humanity, and who at present

is especially interested in promoting the success of the coming celebration of the Centennial Natal Day of our National Anthem, "The Star Spangled Banner."

I have very much pleasure in introducing his Honor, James H. Preston, Mayor of the City of Baltimore.

MAYOR PRESTON.—*Mr. President, Ladies and Gentlemen:* I came here to say a word of welcome to you and to express our appreciation in having you in Baltimore on this occasion, and I hope your deliberations may result in great benefit to mankind. I shall not make an extended speech here this morning, but I am reminded of a story, in which an Irishman once came over to this country, and on arriving in New York he met an Irish friend who, in explaining the various advantages that New York had over other countries, told him that for one thing they did not hang people here for murder, whereupon the visiting Irishman said: "How do you punish them?" "Oh!" said the other, "We elocute them." I shall not "elocute" you to-day.

We are doing a good deal here, ladies and gentlemen, for the cause in which you are all interested and are laboring. We have some very prominent men in our midst who are doing a great work in the line in which you are engaged. We have Dr. Charles G. Hill, Dr. J. Percy Wade, Dr. J. Clement Clark; we have Dr. Brush and Dr. Herring, all great men among us, who are doing good work in the various institutions to which they are attached. I, of course, do not know anything about psychology or psychiatry; I do not know much about insanity, but from a very limited experience, I am convinced and believe that the increase in insanity of which we are all aware, is very largely due to our mode of life. I believe that if we would live a rational, simple life for a generation, instead of gaining in numbers, instead of the percentage of insanity rising, it would fall. I believe the rush to the great cities, the strain of our American life in our large cities, the ambition to succeed in the lines in which we are endeavoring, especially with the people in the great cities, is the cause very largely of the broken down nervous systems and the consequent destruction of mental power and rational forms of thought. This degeneration, it seems to me, must take place with the degeneration of the general nervous system. I know that in the country with which I am most familiar, where the people retire early, where they get up early, where they do manual labor, where there is not this struggle for a livelihood, and where there is not a strain on the nervous system, there is a much smaller percentage of insanity, and I believe we can remedy this to a certain extent without giving the matter any very definite study. If our interests were diversified and we would lead a simple life, after a generation or two there would be a tremendous reduction in the number of insane patients in our institutions. We have here in Baltimore three or four admirable institutions—you gentlemen will of course give these careful inspection. I also wish briefly to call your attention to the fact that we have some beautiful parks, our system of parks is unexcelled, perhaps, in the world; our

harbors and railroad systems, their facilities second to none in the United States as a terminal, making Baltimore one of the great ports of the Atlantic coast. It may be that in between your labor, by way of diversion, you may be able to look over these advantages of ours; to consider our parks, our educational institutions, our harbor and our other facilities; if you can give all these features some thought, some consideration, I feel sure you will take back with you a kind word for Baltimore, and that kind word I reciprocate now, and bid you welcome to Baltimore. (Applause.)

**THE PRESIDENT.**—We have also with us to-day a gentleman, a physician of international reputation in the chosen branch of his profession, both as a teacher of and operator in urology at Johns Hopkins University, and Surgeon-in-Chief of the Brady Urological Clinic, who has also shown an active interest in the welfare of the insane and feeble-minded in the State of Maryland, and who, as a public spirited citizen, has given freely of his time in furthering the interests of the Maryland institutions for the insane, and in obtaining appropriations for carrying them on.

I have very much pleasure in introducing to you Dr. Hugh Hampton Young, President of the Maryland State Lunacy Commission.

**DR. HUGH HAMPTON YOUNG.**—As President of the Lunacy Commission of the State of Maryland, it gives me great pleasure to come here for the purpose of welcoming you to our city. I wish first to thank you for the very great honor you have done me in making me an honorary member of your society, as I understand this is an honor that has not been granted in a number of years. I am, therefore, quite overwhelmed.

It is really remarkable what great reforms have been brought about by this society, which has been one of the most active medical societies in this country, throughout its very long existence. I was really amazed when I read a partial record of its accomplishments. The care of the insane in Maryland has been an extremely slow development. A State Lunacy Commission was not organized until 1886 and for many years it was given very feeble powers; there was no general state-care and no effort on the part of the state to take comprehensive care of the insane, until 1910, when we put through our present state-care act. At the same time additional power and increased appropriations were given to the Lunacy Commission by the first bond issue for the insane (\$600,000) granted at that time. This enabled us to begin a hospital for the negro insane (Crownsville) and to start emptying the county jails and almshouses. We had a terrible fight in the legislature to get these laws. The idea was repeatedly advanced that it was giving the Lunacy Commission far too much power; that the result would be unfavorable to various private institutions, etc. We had to face a great deal of prejudice from those who were trying to prevent our getting this state-care act through, but since this was granted, in 1910, the state legislature has been very generous indeed, and it has required very little effort on our part to get large appropriations and further extensions of our laws that were found to be needed.

In 1912, by unanimous vote of both houses, we were granted \$800,000 for new buildings at the various hospitals and to begin the Eastern Shore State Hospital, which is to take care of the indigent insane on the Eastern Shore of Maryland; and also to erect modern psychiatric hospitals at our Springfield and Spring Grove institutions. The legislature in 1914 granted us \$418,000, so that we should now be able to practically complete our hospitals and to carry out the aim of the state-care act of 1910, which was to take care of all the feeble-minded and insane in the state of Maryland. This has been a great step forward for the institutions in this state. I almost hesitate to tell you how serious conditions were. Our hospitals were caring for the insane then as best they could, but most of the insane were housed in almshouses, jails and places where no human being, in fact no animal, should be allowed to live. Through the efforts of Dr. Herring, our most able and efficient secretary, and the assistance of the daily press, it was possible to demonstrate the need of, and to get the state-care act through the legislature, and to gradually take care of all the insane and feeble-minded in our regular state institutions. I may say the Lunacy Commission in this state is extremely fortunate in the heads of these various state hospitals; we have a splendid group of men in Doctors Clark, Wade, Winterode, Cary, and Keating, and they are doing great things for this state. It has also been a great thing for Maryland to have the Sheppard and Enoch Pratt Hospital near this city, under the care of Dr. Brush. Dr. Hurd, as you know, one of the greatest alienists, has been the greatest help and inspiration to us. The inauguration of the Phipps Psychiatric Clinic means much for the development of psychiatry and, we feel sure, will place Maryland in the very forefront in psychiatry. I hope to see close co-operation between the Phipps Psychiatric Clinic and our various state hospitals and feel sure that great progress will be made in Maryland as a result. The steady increase in insanity and the great cost of maintaining these institutions are our greatest stumbling blocks. When we go back to the legislature, year after year, we are at once confronted with a demand that something be done to diminish the number of insane. I hope your deliberations will take up preventive measures, including sterilization. Many of our legislators are interested in that very question, and I hope that your deliberations will throw light on the matter and make it possible to have some measure of undoubted constitutionality drafted that can be adopted by the various states. There can certainly be no doubt of the great efficacy of those simple operations and their widespread use would very greatly diminish the births of feeble-minded and insane children. Your society and the Society for Mental Hygiene have a wonderful work ahead in the way of instruction in eugenics, the teaching of proper living, and the avoidance of worry. I agree with Governor Goldsborough that the simple life, regular habits, etc., would tend to bring about a diminution in the increase of insanity. It remains for your society to lead the way, but I feel sure that in the near future these great psychiatric hospitals and laboratories, with men devoting them-

selves to research, will accomplish wonderful things, and that this meeting will give evidence of that great progress which has already been made, and that our Lunacy Commission will be the great beneficiary as the result. Applause.

THE PRESIDENT.—I am sure that we all appreciate very much the force of Dr. Young's remarks, especially those of us who have been through the struggle and labor incident to transforming a bad system of caring for the insane into a modern one, by establishing a system of "State care" for the dependent insane and caring for all these patients in hospitals organized and equipped on a hospital basis.

Dr. Young, I thank you on behalf of the Association for your remarks.

We are also favored to-day by the presence of another distinguished member of the medical profession who has kindly consented to come here and tender us a few words of welcome on behalf of the medical profession of Baltimore.

I take great pleasure in introducing Professor Randolph Winslow, President of the Medical and Chirurgical Faculty of Maryland, and Professor of Surgery at the Maryland University.

PROF. WINSLOW.—*Mr. President, Gentlemen of the American Medico-Psychological Association, Ladies and Gentlemen:* I am glad your President remarked that I would deliver "a few words of welcome," for that is what I shall do, and I am sure you will say, "That is the best address of the whole," for this reason.

Through a fortuitous circumstance it has fallen to my lot to have an insignificant, but nevertheless agreeable, place assigned to me on the program of this important meeting of your Association. We appreciate the honor of having you hold your sessions in our midst, and we wish to give you a most cordial welcome. His Excellency, the Governor of Maryland, has extended to you the courtesies of the State, and his Honor, the Mayor of Baltimore, those of the city; Dr. Hugh H. Young has bid you welcome to our institutions for the insane, and there is not much left for me to welcome you to. However, as President of the Medical and Chirurgical Faculty of Maryland, in the name of the medical profession of the State, I again bid you welcome.

We are glad to see you, and we hope that your deliberations may not only be of interest to yourselves, but of permanent benefit to that class of unfortunate sufferers to whose amelioration you have devoted your lives. As wonderful advances have been made in the diagnosis and treatment of mental diseases as in any other department of medicine. It is a far cry from the despairing inquiry of Macbeth, "Can'st thou not minister to a mind diseased?" and the hopeless answer of the doctor: "Therein the patient must minister to himself."

With the recognition that mental aberration is dependent upon diseased processes comes the hopeful reply to the above quoted inquiry, that much may be done to minister to a mind diseased.

May it be your good fortune, gentlemen, to advance still further the outposts of your specialty and to bring into subjection hitherto unconquered territory. (Applause.)

**THE PRESIDENT.**—It is said that a speaker who captivates and enthralls his audience creates an optical illusion that he is about six inches taller than he really is. If this is true, and I have no reason to doubt it, the eloquence of the speakers to whom we have just had the pleasure of listening must make them appear to this audience to be at least *twelve* inches taller than they really are.

The pleasing effect of the words of welcome, so eloquently expressed, which we have just heard, is too apparent to call for a formal motion for a vote of thanks. Knowing, therefore, that I voice the unqualified sentiments of each and every member of the Association in doing so, I take the liberty on behalf of the Association of conveying to you, gentlemen, our sincere thanks for your cordial words of welcome, and I may add that we felicitate ourselves on having selected for our Seventieth Annual Meeting your charming city, which is famed for its beautiful streets and residences, for its fair women, for its culture and refinement, and as a great center of medical education. Then, too, happy coincidence, we are meeting on the centennial anniversary of the birth of our national air, "The Star Spangled Banner," composed by that illustrious son of Maryland, Francis Scott Key, whose name and fame we all admire. Gentlemen, again we thank you.

**DR. BURGESS.**—I would, on behalf of the members of this Association, especially those outside of Maryland, ask that a hearty vote of thanks be extended the gentlemen who have addressed us so ably. I do not think in the many meetings I have attended, dating back to '71, that I have ever heard more able and interesting addresses than those we have listened to this morning, and I for one feel that we should tender the speakers a vote of thanks.

This motion was duly seconded and unanimously carried by rising vote.

**THE PRESIDENT.**—In the absence of Dr. Wagner, who is detained in a medico-legal case in central New York, Dr. Herring has kindly consented to act as Secretary pro tem.

The first order of business is the report of the Committee of Arrangements, of which Dr. Wade is chairman.

#### REPORT OF COMMITTEE OF ARRANGEMENTS.

*Mr. President, and Members of the Association:* It is indeed very gratifying to see so many of our members present at this our Seventieth Annual Meeting, and it is especially pleasing to see so many of the ladies present. We wish to take this opportunity to thank the members of the Association for their hearty co-operation in arranging for this meeting, which has enabled us to arrange the program, both for business and enter-

tainment. We sincerely hope it will prove enjoyable to all, and that the memory of the Seventieth Annual Meeting in Baltimore may linger long and ever be a pleasant one.

In making our report, we beg to submit the following:

This, Tuesday, afternoon, the Ladies' Reception Committee has arranged a tea to be given at the Baltimore Country Club, to which all the ladies of the Association are most cordially invited. Preceding the tea there will be an automobile drive through Druid Hill Park, one of Baltimore's most attractive points of interest. Automobiles will be provided for those who wish to attend, leaving the Hotel Belvedere at 3 o'clock this afternoon.

On Wednesday afternoon we have planned a trip down Chesapeake Bay. The party will leave Hotel Belvedere at 1 p. m. on special cars, arriving at the wharf at the foot of Calvert street, where the city boat, *Latrobe*, which has kindly been placed at our disposal by the Mayor, will convey the members down the Bay, passing en route many points of historical interest. We are especially fortunate in having with us on this trip Professor A. B. Bibbins, Executive Chairman of the National Star Spangled Banner Centennial, who will give a brief talk concerning the points of historical interest which we pass. A buffet luncheon will be served on board, and music will be furnished by the Physicians' Orchestra. The boat will return to the city at 5.30; special cars will be in readiness to convey the party back to the hotel, reaching there at 6 p. m.

On Wednesday evening, at 8.30, in Osler Hall, Dr. Lewellys F. Barker, Professor of Medicine, Johns Hopkins University, will deliver an address on "The Relation of Internal Medicine to Psychiatry." The committee feels particularly fortunate in being able to secure so well known a physician, and one who, as President of the Mental Hygiene Committee, has also been in touch with the work of this Association.

On Wednesday evening, immediately following Dr. Barker's address, there will be a cabaret and vaudeville entertainment in the banquet hall of the Hotel Belvedere, to which the ladies are invited.

On Thursday afternoon, upon invitation of the trustees of the Johns Hopkins Hospital, the Association is invited to visit the Henry Phipps Psychiatric Clinic. Upon arrival at the hospital luncheon will be served. Special cars will be provided to convey the members to and from the hospital, which is located on Broadway and Monument street.

On Friday, at 2 p. m., the Association will be tendered a reception and luncheon at the Sheppard and Enoch Pratt Hospital, by the board of trustees and superintendent. Special cars will be in readiness to convey the members to the institution. Notice of the time of departure will be posted on the bulletin board.

Baltimore is fortunate in having several of the State hospitals and many private sanitariums located in its immediate vicinity, the boards of managers and superintendents of which desire to extend through this committee a most cordial invitation to the members of the Association to visit these

various institutions at their pleasure. Particulars as to route of cars, etc., will be given out by members of the Committee of Arrangements.

The board of governors of the Arundel Club, the leading Woman's Club of the city, also has extended the privileges of their club to the visiting ladies, where they will be very pleased to receive them. The Arundel Club is located just one block south of the hotel on the corner of Charles and Read streets.

The cards presented to the members of the Association upon their registration are not required to be presented at any of the above-mentioned entertainments, but are to serve merely as a reminder as to dates of the different entertainments.

All members of the Association are urgently requested to register promptly at the registration desk, directly opposite the elevator on the twelfth floor of the hotel.

Respectfully submitted,

J. PERCY WADE, *Chairman*,  
CHARLES G. HILL,  
EDWARD N. BRUSH,  
ARTHUR P. HERRING,  
J. CLEMENT CLARK.

THE PRESIDENT.—You have heard the report of the Committee of Arrangements, what is your pleasure in regard to it?

On motion, duly seconded, the report of the Committee of Arrangements was accepted and adopted.

THE PRESIDENT.—The next order of business is the report of the Council, by the Secretary.

REPORT OF THE COUNCIL TO THE AMERICAN MEDICO-PSYCHOLOGICAL  
ASSOCIATION.

BALTIMORE, Md., May 26, 1914.

The Council met on the evening of May 25, 1914, at the Hotel Belvedere, Baltimore, Md. In the absence of Dr. Wagner, Dr. A. P. Herring was appointed Secretary pro tem.

The Council has received and transmits herewith the report of the Treasurer for the current year; also a statement of the membership of the Association to date.

The Council recommends for election to active membership the following named physicians. This list was presented to the Association a year ago, and these names are now submitted for final consideration:

Herman Morris Adler, M. D., Boston, Mass.; W. C. Barber, M. D., Barrie, Ont.; George T. Basket, M. D., St. Peter, Minn.; T. Merrick Bemis, M. D., Worcester, Mass.; Charles J. Carey, M. D., Sykesville, Md.; Sydney A. Dunham, M. D., Buffalo, N. Y.; John L. Eckel, M. D., Buffalo, N. Y.; Horace W. Frink, M. D., New York, N. Y.; Donald Gregg, M. D., Brookline, Mass.; J. Victor Haberman, M. D., New York, N. Y.; Walter C. Haviland, M. D., Worcester, Mass.; Alfred C. Kingsley, M. D., Phoenix,



Ariz.; B. Ross Nairn, M. D., Buffalo, N. Y.; George E. Neuhaus, M. D., Denver, Colo.; John A. Reily, M. D., Patton, Cal.; R. Montfort Schley, M. D., Buffalo, N. Y.; R. W. Bruce Smith, M. D., Toronto, Ont.; William W. Smithson, M. D., Jackson, Miss.; Irving J. Spear, M. D., Baltimore, Md.; S. S. Stack, M. D., Milwaukee, Wis.; Walter B. Swift, M. D., Boston, Mass.; John N. Thomas, M. D., Pineville, La.; Paul Waterman, M. D., Hartford, Conn.; Cornelius C. Whaley, M. D., Pittsburgh, Pa.

The Council recommends for election to honorary membership in the Association: Hugh Hampton Young, M. D., Baltimore, Md.

The Council recommends the transfer of the following named associate members to the active class:

Francis M. Barnes, Jr., M. D., St. Louis, Mo.; W. A. Boyd, M. D., Baltimore, Md.; R. F. Darnall, M. D., Little Rock, Ark.; John J. Harrington, M. D., New York, N. Y.; Raymond F. C. Kieb, M. D., Beacon, N. Y.; Fletcher Langdon, M. D., Cincinnati, O.; F. E. Lawlor, M. D., Halifax, N. S.; R. Leighton Leak, M. D., Syracuse, N. Y.; Edward F. Leonard, M. D., Chicago, Ill.; William S. Osborn, M. D., Des Moines, Ia.; T. A. Ratliff, M. D., Dayton, O.; Walter L. Treadway, M. D., Ellis Island, New York; Forrest C. Tyson, M. D., Augusta, Me.

The Council recommends that the following named physicians be elected to associate membership:

William N. Barnhardt, M. D., Central Islip, N. Y.; R. Grant Barry, M. D., Kings Park, N. Y.; John Hudson Blauvelt, M. D., Beacon, N. Y.; Victor A. Bles, M. D., Elgin, Ill.; J. E. Brothers, M. D., Goldsboro, N. C.; Louis R. Brown, M. D., Middletown, Conn.; Geoffrey C. H. Burns, M. D., Central Islip, N. Y.; Myrtelee M. Canavan, M. D., Boston, Mass.; Clarence O. Cheney, M. D., New York, N. Y.; Herman Walter Corey, M. D., St. Peter, Minn.; H. Irving Cozad, M. D., Cuyahoga Falls, O.; Ira A. Darling, M. D., Warren, Pa.; G. Ward Disbrow, M. D., Springfield, Md.; Arrah B. Evarts, M. D., Washington, D. C.; George T. Faris, M. D., Philadelphia, Pa.; Isaac J. Furman, M. D., Kings Park, N. Y.; Horatio G. Gibson, Jr., M. D., Central Islip, N. Y.; Bernard Glueck, M. D., Washington, D. C.; Milton M. Grover, M. D., Central Islip, N. Y.; Claude D. Hamilton, M. D., Sykesville, Md.; James C. Hassall, M. D., Washington, D. C.; Harry F. Hoffman, M. D., Allentown, Pa.; Harry W. Keatley, M. D., Huntington, W. Va.; Peter L. Keough, M. D., Crownsville, Md.; Edward J. Kempf, M. D., Baltimore, Md.; Herbert Lee, M. D., St. Joseph, Mo.; Helene G. Leehman, M. D., Cedar Grove, N. J.; John E. Lind, M. D., Washington, D. C.; John B. Macdonald, M. D., Hathorne, Mass.; Frank M. Mikels, M. D., Morris Plains, N. J.; C. Ross Miller, M. D., Ogdensburg, N. Y.; Joseph W. Moore, M. D., Beacon, N. Y.; Wm. Alexander Murphy, M. D., Goldsboro, N. C.; Emerson A. North, M. D., Cincinnati, O.; J. A. F. Pfeiffer, M. D., Washington, D. C.; Helena B. Pierson, M. D., Kings Park, N. Y.; H. C. Podall, M. D., Norristown, Pa.; John A. Pritchard, M. D., Ogdensburg, N. Y.; Theodore W. Simon, M. D., Central Islip, N. Y.; W. W. Stancell, M. D., Raleigh, N. C.; Harry A. Steckel, M. D., Kings Park, N. Y.; Robert A. Stewart, M. D., Mt. Pleasant, Ia.; Edward A. Strecker, M. D., Philadelphia, Pa.; Herbert W. Taylor, M. D., Brattleboro,

Vt.; Frederic H. Thorne, M.D., Greystone Park, N. J.; A. A. Thurlow, M.D., Norman, Okla.; John H. Travis, M.D., Hathorne, Mass.; Nelson G. Trueman, M.D., Hathorne, Mass.; Albert E. Ullman, M.D., Central Islip, N. Y.; Adeline M. Wescott, M.D., Central Islip, N. Y.; Anita Alvera Wilson, M.D., Washington, D. C.

The Council has received the following applications for active membership. In accordance with the constitution, final consideration of these will be deferred until next year:

Albert Anderson, M.D., Raleigh, N. C.; F. A. Carmichael, M.D., Osawatomie, Kans.; Guy L. Connor, M.D., Detroit, Mich.; O. H. Cobb, M.D., Syracuse, N. Y.; H. H. Drysdale, M.D., Cleveland, O.; S. J. Fort, M.D., Baltimore, Md.; Robert Henry Haskell, M.D., Ann Arbor, Mich.; Kenneth B. Jones, M.D., Baltimore, Md.; William A. Jones, M.D., Minneapolis, Minn.; Grover A. Kempf, M.D., New York, N. Y.; Hersey G. Locke, M.D., Syracuse, N. Y.; Convas L. Markham, M.D., Amityville, N. Y.; Eugene H. Mullan, M.D., Ellis Island, New York; Michael Osnato, M.D., New York, N. Y.; Charles F. Sanborn, M.D., Cincinnati, O.; Carl W. Sawyer, M.D., Marion, O.; Haight Sims, M.D., Montreal, Que.; L. Gibbons Smart, M.D., Lutherville, Md.; Wesley Taylor, M.D., Detroit, Mich.; Harold W. Wright, M.D., Santa Barbara, Cal.; Herbert C. deV. Cornwall, M.D., New York, N. Y.; Frank W. Keating, M.D., Owings Mills, Md.; Walter C. Van Nuys, M.D., New Castle, Ind.

The Council has received the resignations of the following members, and recommends that they be accepted in so far as their dues are paid to date:

Harry L. Barnes, M.D., Wallum Lake, R. I.; James R. Bolton, M.D., Fishkill-on-Hudson, N. Y.; George V. N. Dearborn, M.D., Boston, Mass.; Hugh H. Dorr, M.D., Batesville, O.; Charles A. Drew, M.D., Worcester, Mass.; Bernard Feldstein, M.D., Kings Park, N. Y.; Charles M. Franklin, M.D., Baltimore, Md.; Frank R. Fry, M.D., St. Louis, Mo.; John J. MacPhee, M.D., New York, N. Y.; Elizabeth Spencer McCall, M.D., Bryn Mawr, Pa.; John Punton, M.D., Kansas City, Mo.; Arthur E. Simonis, M.D., Pennhurst, Pa.; W. A. Taylor, M.D., Trenton, N. J.

The Council further recommends that the Secretary be instructed to notify those in arrears for dues that on payment of same their resignations will be accepted as of members in good standing, otherwise their names will be dropped from the membership list of the Association.

The Council has received copy of resolutions relative to alien insane, which were adopted by the Medical Society of the State of New York, with the request that this Association take some action in regard to them.

It is recommended by the Council that a committee of three members of the Association be appointed to draft resolutions making them international in character.

On motion, duly seconded, the Council voted that the preambles and resolutions to be submitted by the President of the Association, in his address, be approved by the Council, and commended to the Association for consideration and action at the session Wednesday morning.

The Council recommends that the Secretary be instructed to write Dr. N. Emmons Paine, of West Newton, Mass., authorizing him to make a group photograph of the members of the Association, as per his letter to the Secretary of the Association.

Respectfully submitted,

ARTHUR P. HERRING,

*Secretary Pro Tem.*

DR. BRUSH.—I move the report of the Council be accepted and that the resolutions contained in the report be made a special order of business, and I move that these resolutions be adopted.

DR. HENRY M. HURD.—I beg to call Dr. Brush's attention to the fact that these resolutions were to be made a special order of business for Wednesday; I do not think he understood this.

DR. BRUSH.—I withdraw my motion.

THE PRESIDENT.—I was about to say that Dr. Brush's motion was in order except in so far as it referred to the resolutions.

This motion was duly seconded and carried, and the report of the council was accepted and adopted, except the part referring to the resolutions, which will come before the Association for action on Wednesday morning.

DR. BRUSH.—I would like to move that the Health Officer, the Secretary of the Board of Health, and other professional gentlemen of Baltimore be invited to attend this meeting and take part in the discussions.

THE PRESIDENT.—The chair will take the liberty of seconding that motion.

Carried.

DR. S. E. SMITH.—It occurs to me that under the constitution it will be necessary to take some formal action on the list of candidates presented for membership in the Association; as I understand it they must lie on the table twenty-four hours, and should therefore be referred to the Association for action to-morrow morning. Am I not right? I would move that the list of physicians proposed for election come up for final action to-morrow in regular course.

Which motion was duly seconded and carried.

THE PRESIDENT.—We will now hear the report of the Treasurer.

Before submitting his report, the Treasurer desires to make the following statement of the membership of the American Medico-Psychological Association to date:

HONORARY MEMBERS.

Former number .....	20	
Died .....	1	
Present number .....		19

ACTIVE MEMBERS.

Former number .....	398	
Associate to Active.....	16	
Admitted .....	46	
Resigned .....	1	
Dropped .....	1	
Died .....	6	
Present number .....		452

ASSOCIATE MEMBERS.

Former number .....	203	
Admitted .....	64	
Associate to Active.....	16	
Dropped .....	1	
Present number .....		250

Total membership May 26, 1914.....	721
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REPORT OF TREASURER, 1913-1914.

DEBITS.

Balance on hand June 1, 1913.....	\$3,489.95
Received for dues:	
Active members .....	2,200.00
Associate members .....	480.00
Advance dues .....	44.00
Interest on bank deposits.....	71.98
Gummed lists of members.....	10.50
Copy of Transactions.....	1.50
Discount .....	.50
Total .....	\$6,298.43

1913

CREDITS.

June 20.	F. H. Severance (Honorarium), (Lecture on Niagara Frontier) .....	\$50.00
20.	Stenographer (expenses annual meeting Niagara Falls, Ont.) .....	41.20
21.	Clifton Hotel (express on typewriter).....	.50
21.	W. M. English (Niagara Falls exhibit).....	69.50
July 3.	Lord Baltimore Press (Transactions and List of Members) .....	1,334.85
9.	Baggage transfer (Niagara Falls).....	1.00
10.	Armory Press (printing ballots).....	2.00
19.	Postage .....	4.00

Aug.	6.	E. S. Graney (express and telegrams).....	2.85
	20.	Stamped envelopes .....	42.16
Sept.	2.	E. S. Graney (express on reprints).....	3.23
	8.	Lord Baltimore Press (express on Transactions).....	17.59
	11.	Armory Press (printing bill-book and envelopes).....	11.00
	20.	Johns Hopkins Press (reprints from Journal of Insanity) .....	34.00
Oct.	4.	Armory Press (letter-heads, notices and envelopes)...	27.00
	10.	Postage .....	10.00
	15.	One-cent stamped envelopes.....	11.00
Nov.	3.	Armory Press (typewritten letters in re program)....	3.50
	4.	Henry M. Hurd (History account).....	102.42
	21.	Edward N. Brush (Index account).....	150.00
Dec.	2.	Thos. W. Salmon (Mental Hygiene exhibit, Niagara Falls) .....	62.88
	13.	Charles G. Wagner (expenses of conference in re 1914 program) .....	17.50
	24.	Clerical services .....	10.00
1914			
Jan.	2.	Henry M. Hurd (History account).....	148.90
	13.	Edward N. Brush (Index account).....	50.00
Feb.	16.	Edward N. Brush (Index account).....	50.00
	18.	Stamped envelopes .....	21.44
	20.	Charles G. Wagner (telephone, telegrams and car-fares)	3.43
Mar.	2.	Henry M. Hurd (History account).....	123.02
	6.	Postage .....	20.00
	6.	Frank Woodbury (over payment dues).....	5.00
	20.	Edward N. Brush (Index account).....	50.00
Apr.	2.	Preliminary programs, notices and envelopes.....	19.25
	9.	O. P. Chase (postage and car-fares).....	8.20
	22.	Edward N. Brush (Index account).....	50.00
	30.	Henry M. Hurd (History account).....	166.45
May	11.	Margaret M. Bloxham (reporting and typewriting proceedings annual meeting at Niagara Falls, 1913)...	75.00
	12.	Postage .....	8.00
	12.	Edward N. Brush (Index account).....	50.00
	14.	Margaret M. Bloxham (services stenographer and typewriter for year to May 25, 1914).....	120.00
	14.	Programs and envelopes .....	70.00
	14.	O. P. Chase (clerical services to June 1, 1914).....	35.00
	25.	Balance on hand as follows:	
		Emigrant Industrial Savings Bank.....	1,853.98
		City National Bank, Binghamton, N. Y.....	1,362.58
Total .....			\$6,298.43

Respectfully submitted,

CHARLES G. WAGNER, *Treasurer.*

**THE PRESIDENT.**—You have heard the report of the Treasurer; if there be no objection this report will be referred to the Auditors.

The next order of business is the report of the Editors of the *AMERICAN JOURNAL OF INSANITY*.

*To the American Medico-Psychological Association.*—The Members of the Editorial Board of the *AMERICAN JOURNAL OF INSANITY* beg to report that the *JOURNAL* is in a prosperous condition and that the work of the *JOURNAL* during the past year has been unusually active. Since the last meeting of the Association five numbers of the *JOURNAL* have appeared, namely, the four regular numbers and a special number, being number 5 of volume 69, containing the addresses and papers delivered at the opening of the Henry Phipps Psychiatric Clinic of The Johns Hopkins Hospital in April, 1913. This extra number also contains the index of volume 69. The volume completed by this number comprises 1068 pages. The subscribers to the *JOURNAL* have received this extra number without extra compensation on their part, although its publication caused considerable expenditure.

Volume 70, which closed with the April number, contained all the papers read at the last meeting of the Association, together with the Secretary's report of the proceedings, and comprises 994 pages.

It would seem that if the *JOURNAL* is to continue to publish all the papers that are read, which are increasing in number, as well as a selection of the papers which are offered with increasing frequency by contributors who have not presented their papers to the Association, some arrangement will be necessary either to control the number of papers published or the length of the papers or the increasing number of illustrations which are offered with papers which involve a large outlay. The editors hesitate to decline important papers which are presented by contributors from all over the United States, as well as from abroad, and yet they feel that the *JOURNAL* is the organ of the Association and must devote as much of its space as possible to the publication of papers presented at the meeting of the Association. They have, therefore, decided in the case of papers requiring considerable illustration to require that the authors pay at least one half the cost of the preparation of plates and in printing of the illustrations, and in the case of papers in which the authors make extensive changes in proof, introducing matter not appearing in the manuscript, or changing in a very large measure the proof, which involves always considerable expense, to require the authors to pay a part of the cost of such changes, which are always charged in the printing offices by the hour.

The editors realize that, notwithstanding the fact that the price of the *JOURNAL* to members of the Association has been reduced to three dollars, there are a large number of members who do not subscribe for the *JOURNAL*, and also that there are a large number of hospitals in whose libraries the *JOURNAL* does not appear. The Board therefore urges the members of the Association not only to subscribe personally

for the JOURNAL, but to see that the JOURNAL is taken by the institution with which they are connected.

Members of the Association can also be of material aid in increasing the prosperity of the JOURNAL by suggesting to manufacturers of apparatus used in hospitals, makers of instruments, publishers of books, etc., that they advertise in the JOURNAL. An increase in our advertising patronage would materially aid the JOURNAL.

The editors feel that the Association can look upon its JOURNAL with pride and satisfaction and that it should receive the hearty support of all the members of the Association, whose property the JOURNAL really is.

Respectfully submitted,

EDWARD N. BRUSH,  
*For the Editorial Board.*

DR. HANCKER.—I move that the report of the Editors of the AMERICAN JOURNAL OF INSANITY be accepted and the financial part of it referred to the Auditors.

Motion was duly seconded and carried.

DR. BRUSH.—I would ask that the report itself be referred to the Council for such advice as they think best in regard to the suggestions which are made therein.

THE PRESIDENT.—The Chair takes occasion to say in this connection that Dr. Wagner has written me in regard to the cost of printing the index to the JOURNAL OF INSANITY and has presented an array of figures which, if correct, would bankrupt the Association. Now, the Chair has no definite information of its own on the subject and regrets that Dr. Wagner is not here to lay these facts before the Association, but he will probably arrive some time to-day and it will be proper to have him make a statement to you in regard to this matter.

What was your motion, Dr. Brush?

DR. BRUSH.—I made the request that the report of the Editors of the AMERICAN JOURNAL OF INSANITY be referred to the Council for such advice as they may see fit to give on the various recommendations therein made.

THE PRESIDENT.—If there is no objection it will be so referred.

The next in order is the report of the Committee on History of Institutional Care of the Insane in the United States and Canada, by Dr. Henry M. Hurd, Chairman.

*To the American Medico-Psychological Association:* The Committee on the "Institutional Care of the Insane" desires to make the following report:

As usually follows in all such undertakings involving the collection of material from every part of the United States and Canada, the committee has found considerable difficulty in securing uniform results. Although

all persons have been appealed to in a similar manner, by circulars and sample histories, the replies which have been received have varied in character.

In many states officers of institutions have responded cheerfully and promptly to the appeal which has been made. In other states it has been difficult to secure any co-operation or even a reply to all letters of inquiry.

The present status of the "History" is as follows:

The general chapters relating to the Early and Colonial Care of the Insane; The Law of Insanity; Administration and Control of Hospitals; County Care of the Insane; The Chronic and Incurable Insane; The Wisconsin System; History of the Association; History of the JOURNAL OF INSANITY; Hospital and Asylum Periodicals; Early Care of the Insane in Delaware, Pennsylvania, New Hampshire, Rhode Island, Maryland, Connecticut, South Carolina, New Jersey, New York, Massachusetts; State Care; Immigration a Problem in the Care of the Insane; The Care of the Private Insane; Dorothea Lynde Dix; The Establishment of Training Schools for Nurses in Hospitals for Mental Diseases; Government of Institutions for the Insane; Reforms in Caring for the Insane; Development of Hospital Architecture; The "Propositions"; The Non-Medical Treatment of the Insane; Experimental Removals; Employment for the Insane; Individual Treatment; Admissions of Voluntary Patients; The Care of the Criminal Insane; Commitment of the Insane; Conditions Accompanying the Discharge of Patients from Institutions; Immigration and the Alien Insane, are practically ready for publication.

As frequently happens in such histories, it will be seen that a number of topics not originally contemplated in the "History" have developed, which add materially to the amount of preliminary material, and which it is hoped will also add to the interest of the publication. A few of these chapters may need further investigation and labor, but the general chapters are substantially complete.

The committee also has in hand a fair amount of material for the history of individual states and provinces, although some are still lacking because of the failure of co-operation on the part of those who should be interested.

To furnish specific information as to individual states, the committee would report from the following states: From Alabama, the history is complete; all the institutions of California, except a few general details presented by Dr. F. W. Hatch, the General Superintendent, are lacking; Colorado is complete, Connecticut also, with the exception of the one State institution at Norwich; Delaware is complete; District of Columbia is complete; Florida presents no history of the Tallahassee State Hospital; Georgia is complete; Idaho is complete, with the exception of the institution at Blackfoot; from Illinois, through the active efforts of Dr. Dewey, we have histories of Jacksonville State Hospital and the Elgin State Hospital; Dr. Dewey has also assumed the responsibility of the Anna State Hospital, the Chester State Hospital, the Chicago State Hospital, the Kankakee State Hospital, Peoria State Hospital and Water-



town Hospital; Indiana is complete; Iowa, with the exception of the institution at Mt. Pleasant; Kansas is complete; Kentucky has presented no history of the Eastern State Hospital at Lexington; Louisiana has presented the history of a single State hospital, brief and imperfect, that at Jackson; Maine is complete; Maryland is complete, with the exception of the Spring Grove Hospital, the Crownville Hospital, the Sheppard-Pratt Hospital, the Mt. Hope Retreat and the Eastern Shore Hospital; Massachusetts is complete, with the exception of the Northampton State Hospital, the Colony at Gardner and the Tewksbury State Hospital; Michigan is complete, with the exception of the hospital at Ionia; Minnesota is complete, with the exception of the histories of the Anoka State Hospital and the Hastings State Hospital; Missouri is complete, but all the histories are fragmentary and give a very inadequate account of institutions of an important state; Mississippi is complete; Nebraska is complete, with the exception of the State Hospital at Lincoln, the history of which is incomplete; Nevada is complete; New Hampshire is complete; New Jersey has supplied only the history of the Essex County Hospital; the State hospital at Morris Plains has furnished a large amount of excellent material, but it has been impossible to edit it in such a manner as to present a connected history of the institution; there is no history of the hospital at Trenton nor of several other important county hospitals; New Mexico is complete; New York is complete; in North Carolina all the histories have been obtained except that at Morganton, which has been promised; Ohio is practically complete; Oklahoma has furnished a history of the State hospital at Norman, but the histories of the institutions at Supply and Vinita are lacking; in Oregon the two state hospitals are insufficiently reported, only a few data being obtained from a recent report; Pennsylvania is complete with the exception of the Harrisburg State Hospital and the Danville State Hospital; Rhode Island is complete; South Carolina is complete; in South Dakota the hospital at Yankton has furnished no history, although one is promised; Tennessee is complete, with the exception of the institution at Bolivar; Texas and Utah are complete and Virginia is nearly complete; in Washington the history of the institution at Medical Lake has been furnished, but that at Fort Stoiilacoom is lacking; West Virginia is complete; in Wisconsin the Wisconsin State Hospital at Mendota and the Northern Hospital at Winnebago are promised by Dr. Dewey, but the history of the Milwaukee Hospital at Wauwatosa and the Milwaukee Asylum are lacking; Wyoming is lacking.

*Private Institutions.*—The work of collecting the histories of private institutions has been very kindly undertaken by Dr. Richardson of Mercer, Pa., who has spent much time and effort in securing adequate histories. He reports that he has in hand at present about forty histories of private institutions, and many more are promised.

*Biographies.*—It has been possible to compile from the JOURNAL OF INSANITY, from general medical biographies and from biographies written and sent by persons interested in the various states, about 250 biographies

of founders of institutions, superintendents, assistant physicians and other officers.

*Canada.*—In Canada the work has fallen very largely upon Dr. T. J. W. Burgess, whose original paper on the care of the insane in Canada has served as a ground work for the early history of the care of the insane in Canada. Through his efforts and those of other superintendents it has been possible to secure an excellent summary of the laws governing the commitment of the insane in Canada. The committee has also in hand as a result of his efforts, excellent histories of the care of the insane in British Columbia, Alberta, Saskatchewan and Nova Scotia; Dr. Burgess also has in active preparation some other histories.

Although much effort has been made to secure material in regard to the early history of Canada prior to the establishment of hospitals for the insane, the effort has not been crowned with much success.

The history of the insane in New Foundland has not been written because no one could be found who would undertake it. All letters to interested parties have failed to receive any reply.

*Publication.*—The committee recommends that in the matter of publication the same size of page and the same general style be adopted as has been adopted for the past twenty years in the annual volume of "Transactions," and that authority be given to publish as many volumes as may be required to place in the hands of members the material which has been collected. The committee will not relax any efforts to fill up the gaps which exist in the material which has been reported to you. The members of the committee are under many obligations to those members of the Association who have spent much time and effort to assist them in the arduous work of preparing the history. The recommendation is further made that the matter of publication be left to the committee with the addition of the President and the Secretary-Treasurer.

Unless action is taken to the contrary, the committee will plan to insert photographs and ground plans of institutions where they will serve to illustrate the text.

Respectfully submitted,

HENRY M. HURD,

*In Behalf of the Committee.*

THE PRESIDENT.—Gentlemen, the report of Dr. Hurd is before you; what disposition will you make of it?

DR. C. G. HILL.—I move that the report be accepted with thanks to Dr. Hurd for the labor already performed, and that the committee be continued.

DR. HURD.—I would suggest that the motion be amended to read "accepted and referred to the Council."

Motion as amended, was duly seconded and carried.

THE PRESIDENT.—The Chair would appoint as a Nominating Committee the following members:

Dr. Henry M. Hurd, Maryland; Dr. William Mabon, New York; Dr. C. B. Burr, Michigan.

DR. HERRING.—I have been requested to read the following report made by the Secretary:

In compliance with the instructions received at Niagara Falls last year, copies of the report of the Committee on Applied Eugenics, as submitted by the Chairman, Dr. Hubert Work, have been distributed through the mail by the Secretary of the Association, to all the members of the American Medico-Psychological Association; to a large number of physicians in this country and abroad; to many judges and lawyers in the United States and Canada; to the prominent medical journals and daily newspapers in this country and abroad and to many libraries in this country and Canada; copies have also been sent to the members of the Cabinet at Washington, and to the Governors of all the states and territories throughout the United States.

Respectfully submitted,

CHARLES G. WAGNER, *Secretary*.

THE PRESIDENT.—We will now take a short recess for the purpose of registration of members and visitors. The Chair would suggest that those who have not registered do so at once.

The following members registered and were in attendance during the whole or a part of the meeting:

Abbot, E. Stanley, M. D., Assistant Physician McLean Hospital, Waverley, Mass.

Allen, H. D., M. D., Superintendent Allen's Invalid Home, Milledgeville, Ga.

Allen, J. Berton, M. D., Assistant Physician State Hospital, Central Islip, L. I., N. Y.

Amsden, G. S., M. D., Assistant Physician Bloomingdale Hospital, White Plains, N. Y.

Anglin, James V., M. D., Medical Superintendent The Provincial Hospital, St. Johns, N. B., Canada.

Applegate, C. F., M. D., Superintendent Mt. Pleasant State Hospital, Mt. Pleasant, Ia.

Baber, Armitage, M. D., Superintendent Dayton State Hospital, Dayton, O.

Bancroft, Charles P., M. D., Superintendent New Hampshire State Hospital, Concord, N. H.

Barlow, Charles A., M. D., Superintendent Second Hospital for the Insane, Spencer, W. Va.

Beling, Christopher C., M. D., 109 Clinton Ave., Newark, N. J.

Berkley, Henry J., M. D., 1305 Park Ave., Baltimore, Md.

Biddle, Thomas C., M. D., Superintendent Topeka State Hospital, Topeka, Kans.

Bond, Earl D., M. D., Senior Assistant Physician Penna. Hospital for Insane, 4401 Market St., Philadelphia, Pa.

Briggs, L. Vernon, M. D., 64 Beacon St., Boston, Mass.

Brown, George W., M. D., Superintendent Eastern State Hospital, Williamsburg, Va.

Brown, Sanger, Sr., M. D., Kenilworth Sanitarium, Kenilworth, Ill.

Brown, Sanger, II, M. D., Assistant Physician Bloomingdale Hospital, White Plains, N. Y.

Brush, Edward N., M. D., Physician-in-Chief and Superintendent Shepard and Enoch Pratt Hospital, Towson, Md.

Buckley, Albert C., M. D., Assistant Physician Friends Asylum, Frankford, Philadelphia, Pa.

Bullard, E. L., M. D., Physician-in-Charge Chestnut Lodge Sanitarium, Rockville, Md.

Burgess, Thos. J. W., M. D., Superintendent Protestant Hospital for the Insane, Montreal, Que., Canada.

Burnet, Anne, M. D., Wausau, Wis.

Burr, C. B., M. D., Medical Director Oak Grove, Flint, Mich.

Burr, Charles W., M. D., 1918 Spruce St., Philadelphia, Pa.

Busse, E. P., M. D., Superintendent Southeastern Hospital for Insane, Madison, Ind.

Calder, D. H., M. D., Superintendent State Mental Hospital, Provo, Utah.

Caples, Byron M., M. D., Superintendent Waukesha Springs Sanitarium, Waukesha, Wis.

Carey, Charles J., M. D., Superintendent Eastern Shore State Hospital, Cambridge, Md.

Carey, Harris May, M. D., Odessa, Del.

Carlisle, Chester L., M. D., Assistant Physician State Hospital, Kings Park, L. I., N. Y.

Carroll, Robert S., M. D., Medical Director Highland Hospital, Asheville, N. C.

Casamajor, Louis, M. D., 342 West 56th St., New York, N. Y.

Chase, Robert H., M. D., Superintendent Friends Asylum, Frankford, Philadelphia, Pa.

Clark, Charles H., M. D., Superintendent Cleveland State Hospital, Cleveland, O.

Clark, J. Clement, M. D., Superintendent Springfield State Hospital, Sykesville, Md.

Clark, L. Pierce, M. D., 84 East 56th St., New York, N. Y.

Coggins, Jesse C., M. D., Medical Director Laurel Sanitarium, Laurel, Md.

Cook, Robert G., M. D., Physician-in-Charge Brigham Hall, Canandaigua, N. Y.

Copp, Owen, M. D., Superintendent Penna. Hospital for Insane, 4401 Market St., Philadelphia, Pa.

Cornell, W. B., M. D., Executive Secretary Mental Hygiene Committee of Maryland, Towson, Md.

Cotton, Henry A., M. D., Medical Director New Jersey State Hospital, Trenton, N. J.

Crumbacker, W. P., M. D., Superintendent State Hospital, Independence, Ia.

Davies, George W., M. D., Assistant Physician Essex County Hospital, Cedar Grove, N. J.

De La Hoyde, T. Grover, M. D., Assistant Physician Hudson River State Hospital, Poughkeepsie, N. Y.

DeWeese, Cornelius, M. D., Medical Director Laurel Sanitarium, Laurel, Md.

Disbrow, G. Ward, M. D., Assistant Physician Springfield State Hospital, Sykesville, Md.

Donohoe, George, M. D., Superintendent State Hospital for Inebriates, Knoxville, Ia.

Drewry, Wm. Francis, M. D., Superintendent Central State Hospital, Petersburg, Va.

Dunton, Wm. Rush, Jr., M. D., Assistant Physician Sheppard and Enoch Pratt Hospital, Towson, Md.

English, W. M., M. D., Superintendent Hospital for Insane, Hamilton, Ont., Canada.

Evans, Britton D., M. D., Medical Director New Jersey State Hospital, Greystone Park, N. J.

Faison, W. W., M. D., Superintendent State Hospital, Goldsboro, N. C.

Faris, G. T., M. D., Assistant Physician Pennsylvania Hospital for Insane, 4401 Market St., Philadelphia, Pa.

Fisher, E. Moore, M. D., Assistant Physician New Jersey State Hospital, Greystone Park, N. J.

Fordyce, O. O., M. D., Superintendent Athens State Hospital, Athens, O.

Freeman, George H., M. D., Superintendent Hospital Farm for Inebriates, Willmat, Minn.

Frost, Henry P., M. D., Superintendent Boston State Hospital, Dorchester Centre, Mass.

Fuller, Daniel H., M. D., Assistant Physician Pennsylvania Hospital for Insane, Philadelphia, Pa.

Gilliam, Charles F., M. D., Superintendent Columbus State Hospital, Columbus, O.

Glueck, Bernard, M. D., Assistant Physician Government Hospital for Insane, Washington, D. C.

Gordon, Alfred, M. D., 1812 Spruce St., Philadelphia, Pa.

Gorst, Charles, M. D., Superintendent State Hospital for Insane, Mendota, Wis.

Green, Edward M., M. D., Clinical Director Georgia State Sanitarium, Milledgeville, Ga.

Guibord, Alberta S. B., M. D., Psychiatrist Bureau of Social Hygiene, Bedford Hills, N. Y.

Gundry, Alfred T., M. D., Residence Physician The Gundry Sanitarium, Catonsville, Md.

Gundry, Lewis H., M. D., Superintendent Relay Sanitarium, Relay, Md.

Gundry, Richard F., M. D., The Richard Gundry Home, Catonsville, Md.

Guthrie, L. V., M. D., Superintendent West Virginia Asylum, Huntington, W. Va.

Hamilton, C. D., M. D., Assistant Physician Springfield State Hospital, Sykesville, Md.

Hamilton, Samuel W., M. D., Assistant Physician Utica State Hospital, Utica, N. Y.

Hammers, James S., M. D., Assistant Physician State Hospital, Danville, Pa.

Hancker, Wm. H., M. D., Superintendent Delaware State Hospital, Farnhurst, Del.

Harding George T., Jr., M. D., 318 E. State St., Columbus, O.

Harmon, F. W., M. D., Superintendent Longview Hospital, Cincinnati, O.

Harrington, Arthur H., M. D., Superintendent State Hospital for Insane, Howard, R. I.

Haskell, Robert H., M. D., First Assistant Physician State Psychopathic Hospital, Ann Arbor, Mich.

Haviland, C. Floyd, M. D., First Assistant Physician State Hospital, Kings Park, L. I., N. Y.

Hawke, W. W., M. D., 218 S. 16th St., Philadelphia, Pa.

Henry, Hugh C., M. D., First Assistant Physician Central State Hospital, Petersburg, Va.

Herring, Arthur P., M. D., Secretary State Lunacy Commission, 330 N. Charles St., Baltimore, Md.

Heyman, M. B., M. D., Assistant Superintendent State Hospital, Central Islip, L. I., N. Y.

Hickling, D. Percy, M. D., 1304 R. I. Ave., Washington, D. C.

Hill, Charles G., M. D., Physician-in-Chief Mt. Hope Retreat, Arlington, Md.

Hill, Samuel S., M. D., Superintendent State Asylum for Insane, Wernersville, Pa.

Hills, Frederick L., M. D., Superintendent Bangor State Hospital, Bangor, Me.

Hitchcock, Charles W., M. D., 270 Woodward Ave., Detroit, Mich.

Hoch, August, M. D., Director Psychiatric Institute, Ward's Island, New York City.

Hodskin, M. B., M. D., Assistant Physician Monson State Hospital, Palmer, Mass.

Howard, Herbert B., M. D., Superintendent Peter Bent Brigham Hospital, 697 Huntington Ave., Boston, Mass.

Hummer, H. R., M. D., Superintendent Asylum for Insane Indians, Canton, S. D.

Hurd, Arthur W., M. D., Superintendent Buffalo State Hospital, Buffalo, N. Y.

- Hurd, Henry M., M. D., 1210 Fidelity Building, Baltimore, Md.  
Jackson, J. Allen, M. D., Chief Residence Physician Philadelphia Hospital for Insane, Philadelphia, Pa.  
Jones, L. M., M. D., Superintendent Georgia State Sanitarium, Mill-edgeville, Ga.  
Kempf, Edward J., M. D., Assistant Residence Physician Phipps Psychiatric Clinic, Baltimore, Md.  
Keough, Peter L., M. D., First Assistant Physician Crownsville State Hospital, Crownsville, Md.  
Kieb, Raymond F. C., Superintendent Matteawan State Hospital, Beacon, N. Y.  
King, George W., M. D., County Physician, Jersey City, N. J.  
Kirby, George H., M. D., Manhattan State Hospital, New York City.  
Klopp, Henry, I., M. D., Superintendent Homeopathic State Hospital, Allentown, Pa.  
Knopf, S. Adolphus, M. D., 16 West 95th St., New York, N. Y.  
Lamb, Robert B., M. D., Troy, N. Y.  
La Moure, Charles T., M. D., Superintendent Connecticut School for Imbeciles, Lakeville, Conn.  
La Moure, H. A., M. D., Superintendent Colorado Insane Asylum, Pueblo, Colo.  
Laughlin, C. E., M. D., Superintendent Southern Indiana Hospital for Insane, Evansville, Ind.  
Lawton, S. E., M. D., Superintendent Brattleboro Retreat, Brattleboro, Vt.  
Long, T. L., M. D., Assistant Physician Cherokee State Hospital, Cherokee, Ia.  
Love, George R., M. D., Superintendent Toledo State Hospital, Toledo, O.  
Ludlum, S. DeW., M. D., 216 S. 15th St., Philadelphia, Pa.  
Mabon, William, M. D., Superintendent Manhattan State Hospital, Ward's Island, New York City.  
MacDonald, Carlos F., M. D., Physician-in-Charge Dr. MacDonald's House, Central Valley, N. Y.  
McCafferty, Emit L., M. D., Assistant Superintendent Alabama Insane Hospitals, Mt. Vernon, Ala.  
McCall, Elizabeth Spencer, M. D., Bryn Mawr, Pa.  
McKinniss, C. R., M. D., Residence Physician State Hospital for Insane, Norristown, Pa.  
Mellen, Samuel F., M. D., Assistant Physician Hudson River State Hospital, Poughkeepsie, N. Y.  
Mellus, Edward, M. D., Superintendent Newton Nervine, West Newton, Mass.  
Meredith, H. B., M. D., Superintendent State Hospital for Insane, Danville, Pa.  
Meyer, Adolf, M. D., Johns Hopkins Hospital, Baltimore, Md.  
Mitchell, H. W., M. D., Superintendent State Hospital, Warren, Pa.

Mitchell, J. C., M. D., Superintendent Hospital for Insane, Brockville, Ont., Canada.

Morris, John N., M. D., Residence Physician Springfield State Hospital, Sykesville, Md.

Morse, Mary E., M. D., Assistant Pathologist State Hospital, Worcester, Mass.

Murdock, J. M., M. D., Superintendent State Institution for Feeble-minded of Western Pennsylvania, Polk, Pa.

Neff, Irwin H., M. D., Superintendent Foxborough State Hospital, Foxborough, Mass.

Nevin, Ethan A., M. D., Superintendent State Custodial Asylum, Newark, N. Y.

Nevin, John, M. D., Consultant North Hudson Hospital, Jersey City.

O'Harrow, Marian, M. D., Assistant Physician Friends Asylum, Frankford, Philadelphia, Pa.

O'Malley, Mary, M. D., Senior Assistant Physician Government Hospital for Insane, Washington, D. C.

Orton, Samuel T., M. D., Pathologist Pennsylvania Hospital for Insane, 4401 Market St., Philadelphia, Pa.

Packer, Flavius, M. D., Physician-in-Charge West Hill, Riverdale, New York City.

Partlow, Wm. D., M. D., Assistant Superintendent Bryce Hospital, Tuscaloosa, Ala.

Patterson, C. J., M. D., Physician-in-Charge Marshall Sanitarium, Troy, N. Y.

Payne, Guy, M. D., Superintendent Essex County Hospital, Cedar Grove, N. J.

Perry, Middleton L., M. D., Superintendent State Hospital for Epileptics, Parsons, Kans.

Peterson, Jessie M., M. D., State Hospital for Insane, Norristown, Pa.

Pierson, Clarence, M. D., Superintendent East Louisiana Hospital for Insane, Jackson, La.

Pogue, Mary E., M. D., Physician-in-Charge Oak Leigh, Lake Geneva, Wis.

Prout, Thomas P., M. D., Superintendent Fair Oaks Sanatorium, Summit, N. J.

Purdum, H. D., M. D., Assistant Physician Springfield State Hospital, Sykesville, Md.

Rhein, John H. W., M. D., 1732 Pine St., Philadelphia, Pa.

Richards, Robert L., M. D., Superintendent Mendocino State Hospital, Talmage, Cal.

Ridgway, R. F. L., M. D., First Assistant Physician Pennsylvania State Lunatic Hospital, Harrisburg, Pa.

Salmon, Thomas W., M. D., National Committee for Mental Hygiene, 50 Union Sq., New York, N. Y.

Sargent, George F., M. D., Assistant Physician Sheppard and Enoch Pratt Hospital, Towson, Md.



Schlapp, Max G., M. D., Director Clearing House for Mental Defectives, 40 E. 41st St., New York, N. Y.

Searl, W. A., M. D., Medical Director Fair Oaks Villa, Cuyahoga Falls, Ohio.

Sheehan, R. F., M. D., Government Hospital for Insane, Washington, D. C.

Sights, H. P., M. D., Superintendent Western State Hospital, Hopkinsville, Ky.

Slocum, C. J., M. D., Resident Physician Dr. MacDonald's House, Central Valley, N. Y.

Smart, L. Gibbons, M. D., Medical Director Creighton Sanitarium, Lutherville, Md.

Smith, Samuel E., M. D., Medical Superintendent Eastern Indiana Hospital for Insane, Richmond, Ind.

Somers, Elbert M., M. D., Superintendent Long Island State Hospital, Brooklyn, N. Y.

Southard, E. E., M. D., Director Psychopathic Hospital, Boston, Mass.

Spear, Irving J., M. D., 1810 Madison Ave., Baltimore, Md.

Stack, S. S., M. D., St. Mary's Hill, Milwaukee, Wis.

Stedman, Henry R., M. D., Director Bournewood Hospital, Brookline, Mass.

Stick, H. Louis, M. D., Superintendent Worcester State Asylum, Worcester, Mass.

Strecker, Edward A., M. D., Assistant Physician Pennsylvania Hospital for Insane, Philadelphia, Pa.

Taylor, Isaac M., M. D., Resident Superintendent Broadoaks Sanatorium, Morganton, N. C.

Terflinger, Frederick W., M. D., Superintendent Northern Hospital for Insane, Logansport, Ind.

Thompson, Charles E., M. D., Superintendent Gardner State Colony, Gardner, Mass.

Thompson, W. N., M. D., Superintendent Hartford Retreat, Hartford, Conn.

Truitt, Ralph P., M. D., First Assistant Resident Physician Phipps Clinic, Johns Hopkins Hospital, Baltimore, Md.

Tyson, Forrest C., M. D., Superintendent Augusta State Hospital, Augusta, Me.

Villeneuve, George, M. D., Superintendent St. Jean de Dieu Hospital, P. O. Box 2947, Montreal, Que., Canada.

Wade, J. Percy, M. D., Superintendent Spring Grove State Hospital, Catonsville, Md.

Wagner, Charles G., M. D., Superintendent Binghamton State Hospital, Binghamton, N. Y.

Wardner, Drew, M. D., Assistant Physician Essex County Hospital, Cedar Grove, N. J.

White, Moses J., M. D., Superintendent Milwaukee Hospital for the Insane, Wauwatosa, Wis.

White, William A., M. D., Superintendent Government Hospital for the Insane, Washington, D. C.

White, W. R., M. D., Superintendent Patapsco Manor Sanitarium, Ellicott City, Md.

Williams, G. H., M. D., Assistant Superintendent Columbus State Hospital, Columbus, O.

Williams, Tom A., M. D., 1705 N St., Washington, D. C.

Wilson, Wm. Tassie, M. D., Superintendent Hospital for Insane, Penetanguishene, Ont., Canada.

Winterode, Robert P., M. D., Superintendent Crownsville State Hospital, Crownsville, Md.

Woodbury, Frank, M. D., Secretary Committee on Lunacy of Pennsylvania, 717 Bulletin Building, Philadelphia, Pa.

Wright, W. W., M. D., Assistant Physician Psychiatric Institute, Ward's Island, New York City.

Yarbrough, Y. H., M. D., Assistant Physician Georgia State Sanitarium, Milledgeville, Ga.

The following visitors and guests of the Association registered their names with the Secretary:

Anderson, Albert, M. D., Superintendent State Hospital, Raleigh, N. C.  
Anderson, Paul V., M. D., Resident Physician Westbrook Sanatorium, Richmond, Va.

Bancroft, Mrs. Charles P., Concord, N. H.

Beers, Clifford W., Secretary National Committee for Mental Hygiene, 50 Union Sq., New York, N. Y.

Bennett, John, M. D., Phipps Psychiatric Clinic, Baltimore, Md.

Bryson, Louise Fiske, M. D., Mt. Washington, Md.

Campbell, C. Macfie, M. D., Phipps Psychiatric Clinic, Baltimore, Md.

Curtiss, Dora, 1524 Park Ave., New York City.

Dunlap, Charles B., M. D., Associate in Neuropathology, Psychiatric Institute, Ward's Island, New York City.

Evans, Mrs. B. D., Greystone Park, N. J.

Evans, Miss Louise, Greystone Park, N. J.

Evans, Buckley, Greystone Park, N. J.

Farrell, Elizabeth E., 500 Park Ave., New York City.

Fisher, Mrs. E. Moore, Greystone Park, N. J.

Flournoy, Henri, M. D., House Staff Phipps Clinic, Baltimore, Md.

Fort, Samuel J., M. D., Medical Director Gelston Heights Sanitarium, Baltimore, Md.

Francisco, H. M., M. D., Cleveland State Hospital, Cleveland, O.

Gibbs, John S., President Board of Managers Spring Grove State Hospital, Baltimore, Md.

Gillis, Andrew C., M. D., 914 N. Charles St., Baltimore, Md.

Gundry, Wm. P., Member Board of Managers Crownsville State Hospital, Catonsville, Md.

- Hall, R. W., M. D., Phipps Clinic, Baltimore, Md.  
Hallowell, Madeline A., Vineland, N. J.  
Heiskell, Dorothea B., M. D., 1708 Madison Ave., Baltimore, Md.  
Hocking, George H., Maryland.  
Hyde, George E., M. D., Superintendent Idaho Insane Asylum, Blackfoot, Idaho.  
Johnson, J. E., Cincinnati, O.  
Kelley, L. G., Member Utah State Board of Insanity, Salt Lake City.  
Lange, T. F., Rome State Custodial Asylum, Rome, N. Y.  
Libby, Elmer R., State Board of Insanity, Boston, Mass.  
McLean, W. S., State Asylum, Wernersville, Pa.  
Miller, Susan L., Allentown, Pa.  
Moneuse, E. D., Washington, D. C.  
Nevin, Mrs. John, Jersey City, N. J.  
Osper, J. B., Towson, Md.  
Parker, Miss Louise, Washington, D. C.  
Roche, Lily T., Norristown, Pa.  
Schauffler, Wm. Gray, 400 Madison Ave., Lakewood, N. J.  
Smalley, Miss Evelyn, 50 Union Sq., New York, N. Y.  
Smith, Walter J., 43 Wooster St., New York, N. Y.  
Steele, S. M., M. D., Superintendent West Virginia Hospital for Insane, Weston, W. Va.  
Walling, Mrs. Stewart D., Colorado State Board of Charities.  
Taneyhill, G. Lane, M. D., 1103 Madison Ave., Baltimore, Md.  
Terflinger, Mrs. F. W., Logansport, Ind.  
Trefethen, H. A., Washington, D. C.  
Van Nuys, W. C., M. D., Superintendent Indiana Village for Epileptics, New Castle, Ind.  
Williams, L. L., M. D., Surgeon United States Public Health Service, Ellis Island, New York City.  
Young, Ernest H., M. D., Assistant Superintendent Rockwood Hospital, Kingston, Ont.  
Zimmerman, Robert F., M. D., Assistant Physician Utica State Hospital, Utica, N. Y.

**THE PRESIDENT.**—The Association will please come to order. The next in order is the memorial notices of members who have died during the year.

**DR. C. B. BURR.**—I move that the memorial notices be received and published in full in the Transactions of the Association.

Motion was duly seconded and carried.

The following memorial notices were read by title:

Dr. George Smith Adams, by H. O. Spalding, M. D.; Dr. Henry S. Upson, by H. C. Eyman, M. D.; Dr. E. H. Pomeroy, by Henry M. Hurd, M. D.; Dr. H. A. Tomlinson, by W. A. Jones, M. D.; Dr. S. Weir

Mitchell, by Charles W. Burr, M. D.; Dr. Ralph L. Parsons, by Theodore H. Kellogg, M. D.; Dr. Edward W. King, by F. W. Hatch, M. D.; Dr. Thomas J. Moher, by George C. Kidd, M. D.

THE PRESIDENT.—The next in order on the program is the President's address.

DR. HANCKER.—In view of the small attendance at the present time, I would suggest that the address of the President be postponed and taken up as the first order of business this afternoon.

On motion, the meeting adjourned.

#### AFTERNOON SESSION.

DR. S. E. SMITH (presiding).—The Association will please come to order.

The program calls for the address of the President postponed from the morning session.

The President of the Association, Dr. Carlos F. MacDonald, then read his address, which was greeted with applause.

DR. S. E. SMITH.—Members of the Association, you have listened to a very interesting address by our worthy President, and while custom decrees that the President's address is not a subject for discussion, the Chair will entertain a motion for a vote of thanks, which will give opportunity for some expression, if any member desires to do so, regarding the address at this time.

DR. VILLENEUVE.—I think it is proper to move a vote of thanks for the able address that has been delivered, and I would move that a vote of thanks be given Dr. MacDonald.

This motion was duly seconded and carried.

DR. S. E. SMITH.—Mr. President, the Association extends to you a vote of thanks for your very able and interesting address. It assures you also that it will give careful consideration to the resolutions you have submitted, at the morning session to-morrow.

DR. HERRING.—*Gentlemen*: The symposium which is listed for this afternoon has been postponed until evening, first, for the reason that there is to be a lantern slide exhibition in connection with some of the papers, which we are unable to have in this room; and second, we have sent out invitations to the physicians in Baltimore to attend this session and we think they will be especially interested in hearing the symposium on General Paralysis. Therefore, if there is no objection, the program listed for to-night will be presented this afternoon so far as practicable.

**THE PRESIDENT.**—We will proceed this afternoon with the program that was arranged for to-night so far as it may be feasible to carry it out. I do not know how many are present whose names appear on the program for this evening, but I will call for the papers in the order in which they are listed. The first paper on the program will be: "Report of a Case of Cerebellar Tumor, with Pathological Findings," by Dr. W. M. English, Hamilton, Ont.

The following papers were read:

"Report of a Case of Cerebellar Tumor with Pathological Findings," by W. M. English, M. D., Hamilton, Ont. Discussed by Dr. Wm. A. White.

"Clinical and Anatomical Analysis of Eleven Cases of Mental Disease Arising in the Second Decade, with Special Reference to Cortical Hyperpigmentation in Manic-Depressive Insanity," by Earl D. Bond, M. D., Philadelphia, Pa., and E. E. Southard, M. D., Boston, Mass., read by Dr. Southard.

"What is Paranoia?" by E. Stanley Abbot, M. D., Waverley, Mass. Discussed by Dr. C. B. Burr, and Dr. Abbot in closing.

"Is There an Increase Among the Dementing Psychoses?" by Charles P. Bancroft, M. D., Concord, N. H.

"Recidivation and Recommitments in Mental Troubles," by George Villeneuve, M. D., Montreal, Que.

On motion the meeting adjourned.

#### EVENING SESSION.

##### OSLER HALL, MEDICAL LIBRARY.

**THE PRESIDENT.**—The time has arrived when we must commence the program for the evening, which will consist of a symposium on General Paralysis; the first paper in this symposium will be "General Paralysis as a Public Health Problem," by Dr. Salmon.

The discussion of these contributions to the symposium will be deferred until we have heard from all, when there will be opportunity for general discussion of the subject.

The following papers were read:

"General Paralysis as a Public Health Problem," by Thomas W. Salmon, M. D., New York, N. Y.

"The Pathology of General Paralysis," by Charles B. Dunlap, M. D., New York, N. Y. (Illustrated by lantern slides.)

"The Diagnosis of General Paralysis," by Adolf Meyer, M. D., Baltimore, Md.

"The Treatment of General Paralysis by Salvarsanized Serum," by Henry A. Cotton, M. D., Trenton, N. J. (Illustrated by lantern slides.)

"A Report on Five Cases of Intra-cranial Injection of Auto-Sero-Salvarsan," by Drew M. Wardner, M. D., Cedar Grove, N. J.

THE PRESIDENT.—The discussion will be opened by Dr. H. W. Mitchell, of Warren, Pa.

These papers were discussed by Drs. Mitchell, Swift, Williams and Gorst.

Adjournment.

WEDNESDAY, MAY 27, 1914, 10 A. M.

The meeting was called to order by the President.

THE PRESIDENT.—The first order of business is the report of the Council.

REPORT OF THE COUNCIL FOR MAY 27, 1914.

The Council recommends the election of the following named physicians to associate membership:

Edgar L. Braunlin, M. D., Dayton, O.; Morgan B. Hodskin, M. D., Palmer, Mass.; Eva Charlotte Reid, M. D., Talmage, Cal.; N. P. Walker, M. D., Milledgeville, Ga.

The Council has received the following applications for active membership. In accordance with the constitution, final action will be deferred until next year:

Paul V. Anderson, M. D., Richmond, Va.; J. Henry Clark, M. D., Newark, N. J.; D. W. Deuschle, M. D., Columbus, O.; Andrew C. Gillis, M. D., Baltimore, Md.; James K. Hall, M. D., Richmond, Va.; Ernest A. Young, M. D., Kingston, Ont.

Respectfully submitted,

CHARLES G. WAGNER, *Secretary*.

On motion, duly seconded, the report of the Council was accepted and adopted.

THE PRESIDENT.—The next order of business is the election of members proposed yesterday. The Secretary will read their names.

(This list is given in the first report of the Council.)

DR. BURGESS.—I move that these members be elected and that the Secretary be instructed to cast the ballot of the Association electing these gentlemen to active and associate membership, and also that Dr. H. H. Young be elected to honorary membership.

Which motion was duly seconded and carried.

**THE PRESIDENT.**—The Secretary has cast the ballot of the Association as instructed and these physicians are elected members of the Association.

The next in order is unfinished business; the Secretary will present a matter of business at this time.

**THE SECRETARY.**—The Council has recommended the adoption by the Association of the following preambles and resolutions submitted to it by the President:

**WHEREAS,** It is universally conceded that feeble-minded persons are, by reason of their mental deficiency, unable to conform to the laws that govern normal people, and hold themselves to acceptable standards of work and morality; and

**WHEREAS,** The inability of the feeble-minded to assume the responsibility for their own conduct renders them a burden to their families and a menace to the public, upon whom the burden of their maintenance, of their criminality, of their weakness and of their immorality ultimately falls; and

**WHEREAS,** Many feeble-minded persons are susceptible to training and becoming self-supporting, useful individuals; and

**WHEREAS,** It is the consensus of scientific belief that by the application of vigorous measures the conditions producing feeble-mindedness may be, in great measure, controlled and the number of such persons reduced to those arising from exogenous or accidental causes; therefore, be it

*Resolved,* That it is the duty of every community to properly care and provide for all classes of idiots, feeble-minded persons and mental defectives, and that, in order to secure their greatest good and highest welfare, it is indispensable that institutions for their exclusive care and treatment, under competent medical supervision, and free from partisan influences, should be provided, and that it is improper, except from extreme necessity, as a temporary arrangement, to confine feeble-minded or mentally defective persons in jails, almshouses or other institutions not especially provided for their proper care and education.

*Resolved,* That every state and country represented by this Association should enact adequate laws for the proper segregation of feeble-minded persons, and the prevention of propagation of their kind, by separating the sexes and precluding ill-advised contact with the world at large.

*Resolved,* That these same states and countries should enact a marriage law which will require a clean bill of health and evidence of normal mind before a marriage license is issued.

**DR. SMITH.**—I move the adoption of the resolutions.

Motion seconded.

**THE PRESIDENT.**—It has been moved and seconded that these resolutions as read by the Secretary, be accepted and adopted; any remarks?

**DR. WM. A. WHITE.**—I think it is very ill-advised for this Association to go on record as recommending the enactment of marriage laws in this

blanket sort of way. These things have been tried elsewhere and have been shown to be hopeless failures, in many instances at least, and where there is effort made to restrict marriage under certain laws it has led to discouragement of marriage to a certain extent, and also naturally towards illegitimate sexual relations. Whereas, in an abstract way the thing is all right, I believe it would be unwise to recommend its adoption and by so doing tend to cause legislators to rush into ill-advised legislation. While I approve of the resolutions with that exception, I should disapprove of them with that final paragraph. I think we should go into this matter carefully. I believe that such resolutions as these should be laid upon the table until we have discussed the "Eugenics" papers that are to be presented to-morrow.

DR. BURGESS.—I do not quite agree with Dr. White. I do not think that the resolution proposed by the Chair can do any harm; it always has a deterring effect, and as I said before, it can do no harm.

DR. TOM A. WILLIAMS.—I would like to have the resolution read again so as to get the exact wording of the last paragraph.

The Secretary re-read the last paragraph of the resolutions.

THE PRESIDENT.—Any further remarks? I think the Association understands the motion is to adopt these resolutions; all in favor please signify by saying aye. Opposed, no.

THE PRESIDENT.—There seems to be a division; the Chair will call for a rising vote.

A rising vote was taken, the Secretary counting.

THE PRESIDENT.—The Secretary informs me that the vote on the motion before the house is twenty in favor and fifty-two opposed. The motion is, therefore, lost.

DR. BRUSH.—Is a motion to reconsider the resolution in order?

THE PRESIDENT.—It is.

DR. BRUSH.—I move that the resolutions just rejected be reconsidered, with the objectionable clause in regard to the marriage law stricken out.

THE PRESIDENT.—It has been moved and seconded that the last clause of the resolutions relating to marriage laws, be omitted; all in favor of this amendment, please signify by saying aye.

Carried.

THE PRESIDENT.—The Chair will now entertain a motion to adopt the resolutions as amended, omitting the last clause in relation to marriage laws.



DR. BRUSH.—I move the resolutions as amended be adopted.

Which motion was duly seconded and carried.

The Secretary, at the request of Dr. Hoch, called attention to a resolution adopted by the Association at its annual meeting held at Atlantic City in 1912, which provides for the co-operation of this Association and its members individually with the work of the National Committee for Mental Hygiene.

DR. STEDMAN.—I have been asked to present the following resolution, with which I am in hearty sympathy:

WHEREAS, A bill has been introduced in Congress providing for the establishment of a Division of Mental Hygiene in the United States Public Health Service for the study and investigation of mental disorders and "their causes, care and prevention"; therefore, be it

*Resolved*, That the American Medico-Psychological Association, now assembled in its Seventieth Annual Meeting, hereby records its hearty approval of this measure, which, we believe, if carried into effect, will be the most important step yet taken by this government to deal adequately with the great problem of the treatment and prevention of mental diseases; and be it further

*Resolved*, That the Secretary of this Association be instructed to send a copy of these resolutions to the President of the United States, to each member of the United States Senate and of the House of Representatives, and to the Surgeon-General of the United States Public Health Service.

THE PRESIDENT.—The resolution offered by Dr. Stedman is before the Association, subject to a motion respecting its adoption.

DR. BURR.—I move the adoption of the resolution.

Seconded.

THE PRESIDENT.—You have heard the resolution as read by Dr. Stedman, and the motion which is now before you; are there any remarks?

DR. WILLIAMS.—It might be proper to have this resolution referred to a committee for further consideration.

DR. BURGESS.—I think the same resolution, or nearly the same was brought before the Council on Monday evening, and it was agreed that it should be left over, the idea being to make it international in character. I think the Council agreed to refer it to a committee of three, and to bring it before the Association for action at this session.

DR. SALMON.—I would like to say a few words about the purpose of the bill to which Dr. Stedman refers. Thus far the United States Government has done practically nothing in the work of prevention of mental diseases, while everybody is familiar with what has been accomplished in

the control of infectious diseases, especially those of a quarantinable nature. All the work done by the Public Health Service in the different states, except in a few instances where contagious disease threatened to extend across state boundaries and federal action was imperative, has been done upon the request of the local authorities. Although a recent act of Congress gives the Public Health Service authority to study any of the diseases of man, that service cannot go into a state and undertake active work for prevention unless it is invited by the local authorities to do so. This bill simply makes it possible for the Public Health Service to employ the same methods in the field of mental hygiene which it has used so successfully in other departments of preventive medicine. There is not the slightest possibility that the prerogatives of any state board of administration or of any institution will be invaded; on the other hand, help of the most useful kind will be available.

When it was proposed a few years ago to unite all the medical activities of the government in a Department of Public Health, the patent medicine proprietors, the Christian Scientists and the "food-dopers" throughout the country said that this was only an attempt on the part of the federal government to enter the homes and treat the children of our citizens against their will. Of course this contention was absurd, but it is a special reason, it seems to me, why this Association ought to be careful not to show the faintest suspicion of a similar sort toward the establishment of a government agency for work in prevention and better care of mental diseases.

This Association is dealing with some of the most difficult problems in medicine and sociology and we should welcome the strong aid of the federal government. It has been withheld long enough.

If one of the gentlemen here, who is a superintendent of a state hospital, had hog cholera break out among the animals on the farm of his institution, the federal government would not only give him advice as to how to manage the disease, disinfect the pens and treat the sick animals, but, in certain cases, it would send well-trained men to do it for him. In many other problems affecting his farm he would obtain similar advice from the United States Government; but if he decided to build a new reception hospital for the active treatment of acute cases of mental disease, to institute some new forms of diversion or occupation for his patients, to adopt a plan for collecting and interpreting the statistics of his institution, or to provide after-care for his paroled patients, there is not a single department of the government to which he could turn for advice and aid at the present time. If this bill passes, the Division of Mental Hygiene in the Public Health Service will be able to work continuously upon such problems, and to assemble the best trained men available for the work. I know from the experience of the National Committee for Mental Hygiene how great is the need for careful study of some of the problems of administration and treatment in the care of the insane. We have tried to deal with these matters as well as our resources permit, but the establishment of a division in an organization

like the Public Health Service would do far more than we could do in this direction, and would leave us free to devote our time to the social and humanitarian aspects of the care of the insane for which our type of organization seems best fitted.

DR. BIDDLE.—I would like to ask if there was a motion made for the adoption of this resolution preceding this last motion?

THE PRESIDENT.—As the Chair understands it, there is only one motion before the house—the motion for the adoption of the resolution offered by Dr. Stedman. If the Chair is in error, it would like to be corrected.

DR. WILLIAMS.—This Association is composed of men who are old in the practice of psychiatry, and it seems to me unwise to deprive them of the opportunity of mature deliberation of an important question. It seems to me the wiser course that this should be thrashed out elsewhere. In spite of Dr. Salmon's eloquence, I believe it is better that this should be taken under consideration by an appropriate committee and then presented to the Association.

THE PRESIDENT.—As the Chair understands it, there is a motion before the house for the adoption of Dr. Stedman's resolution; all in favor of that motion please signify by saying aye. Opposed, no.

Carried.

THE PRESIDENT.—The next order of business is the report of the Nominating Committee.

DR. HENRY M. HURD.—Your Nominating Committee reports as follows:

For President, Dr. S. E. Smith, Richmond, Ind.

For Vice-President, Dr. Edward N. Brush, Baltimore, Md.

For Secretary-Treasurer, Dr. Charles G. Wagner, Binghamton, N. Y.

For Councilors for three years: Dr. H. R. Stedman, Boston, Mass.;

Dr. E. M. Green, Milledgeville, Ga.; Dr. W. M. English, Hamilton, Ont.;

Dr. C. F. Applegate, Mt. Pleasant, Ia.

For Auditor for three years, Dr. M. B. Heyman, Central Islip, N. Y.

Respectfully submitted,

HENRY M. HURD,

WILLIAM MABON,

C. B. BURR,

*Committee.*

THE PRESIDENT.—The report of the Nominating Committee is before the Association; the Chair will entertain a motion respecting the disposition of this report.

DR. A. W. HURD.—I move the report be accepted and adopted.

THE PRESIDENT.—I suppose it is in order to authorize the Secretary to cast the ballot of the Association for the election of these officers named.

On motion, duly seconded, the Secretary was instructed to cast a single ballot for the election of the officers as nominated by the Nominating Committee.

THE PRESIDENT.—The Chair would announce that the Secretary has cast the ballot in accordance with the instructions of the Association, and hereby declares these officers duly elected.

We will now have the report of the Auditors.

DR. SOMERS.—I have examined the books and papers of the Association, including the bank-books, and found everything in good order, and according to the report of the Treasurer. The same is true of the report of the Editors of the *AMERICAN JOURNAL OF INSANITY*.

DR. HENRY M. HURD.—I move the report of the Auditors be accepted and adopted.

Which motion was duly seconded and carried.

THE PRESIDENT.—The Chair will announce the Committee on Resolutions before the close of the session.

The next order of business is amendments to the constitution; are there any to be offered?

DR. HENRY M. HURD.—In accordance with the written notice given at the 1913 meeting, at Niagara Falls, Ont., I move the following amendments to the constitution:

#### AMENDMENT TO ARTICLE III.

Article III to be amended to read as follows:

"There shall be five classes of members: (1) Active members, who shall be physicians resident in the United States and British America, especially interested in the treatment of insanity; (2) Associate members; (3) Life members; (4) Honorary members and (5) Corresponding members."

#### AMENDMENT TO ARTICLE V.

Add in line 4, after Active members, the following words:

"Life members shall be such Active members as shall have been members of the Association for a consecutive period of thirty (30) years."

#### AMENDMENT TO ARTICLE VI.

Add the word "Life" in line 2 of third paragraph, so that it may read:

"Life, Honorary and Corresponding members shall be exempt from all payments to the Association."

DR. HENRY M. HURD.—I move that this amendment be now adopted.

DR. WAGNER.—Before the Association acts upon these amendments I would like to call attention to one word in the amendment to Article VI, which provides that "Life, Honorary and Corresponding members shall be exempt from all payments to the Association." It occurs to me that possibly that might be a little too sweeping, as it might be interpreted as including subscription to the JOURNAL OF INSANITY, the new index, payments for the volumes of the History, or any special matter that required financial assistance in the future. I am not here to oppose it, but I thought it worthy of a little further consideration.

DR. HENRY M. HURD.—I think it is a little too broad. I intended to say "all payments for dues to the Association." I move, Mr. President, that the amendment to Article VI be amended by adding "all payments of annual dues to the Association,"

Dr. Hurd's motion, as amended, was duly seconded and carried.

THE PRESIDENT.—The next order of business, and the last before we proceed to the reading of papers, is the report of the Committee on Statistics, Dr. Thomas W. Salmon, Chairman.

DR. SALMON.—The committee has had several meetings during the year and has very carefully considered the matters outlined in the discussion at the meeting last year. In this we have had the very valuable advice and co-operation of Dr. Horatio M. Pollock, Statistician of the New York State Hospital Commission. Dr. Pollock has given a great deal of his time to the work and we feel deeply grateful to him for his interest and courtesy. Dr. August Hoch has very kindly given us the benefit of his knowledge in the consideration of some proposed tables on psychoses, and we wish to acknowledge our appreciation.

The Census Bureau has been communicated with by this committee and an effort will be made to frame tables which can also be used by that bureau in the enumeration of the insane which is made every ten years.

A number of tables have been considered and a series has been tentatively planned. It seems undesirable to present any tables until all have been completed, for it is desired to have all the tables bear a logical relation to each other.

Therefore, this committee requests that the Association will continue it for another year, at the expiration of which time we will be able to render a full report for the consideration of the Association.

DR. C. B. BURR.—I move the committee be granted an extension of time.

Motion duly seconded and carried.

THE PRESIDENT.—The first paper on the scientific program this morning is by Dr. Charles W. Burr, of Philadelphia, Pa., and Dr. Francis X. Dercum, of Philadelphia, will open the discussion, by invitation.

Dr. Burr then read a paper entitled "A Criticism of Psycho-analysis." Discussed by Drs. Dercum (by invitation), Wm. A. White, Hoch, Williams and Burr in closing.

DR. HILL.—I want to make a motion that, as this subject has assumed a great deal of interest on account of its excellent presentations on both sides, it be made a part of our program in the form of a symposium at our next meeting and that we invite Drs. Burr, Dercum and White and others to present different sides of the question at the meeting, when we can discuss it more deliberately, for I am sure we would like to have it more generally discussed.

THE PRESIDENT.—The Chair was about to suggest, when Dr. Hill made his motion, that inasmuch as we have only ten minutes more to devote to discussion of this subject, the discussion be suspended and taken up this afternoon on the boat, or at some future session of this meeting; if it goes over for a year the gentlemen who have presented it may not be here and we are likely to lose interest in the matter.

DR. STEDMAN.—I move the thanks of the Association be extended to our guest, Dr. Dercum, for his most able contribution to this important discussion.

Which motion was duly seconded and carried.

THE PRESIDENT.—The meeting is adjourned to meet on the boat for a trip down the bay at 1 p. m.

#### AFTERNOON SESSION.

At 1 p. m. the members of the Association and their friends enjoyed a trip down the Chesapeake Bay as guests of the Committee of Arrangements, leaving the hotel in special cars which conveyed them to the wharf, where they boarded the city boat *Latrobe*, which had been placed at the disposal of the committee by the Mayor. A buffet luncheon was served on board the boat, and the Physicians' Orchestra furnished delightful music during the trip. Many historical points of interest were passed en route; one of the special features of the afternoon's entertainment was a demonstration by the fire-boat *Deluge*, shortly after leaving the wharf. A most enjoyable afternoon was spent, the party returning at 5.30 p. m., when special cars were waiting to convey them to the hotel, arriving there at 6 o'clock.

## EVENING SESSION.

## OSLER HALL.

THE PRESIDENT.—The Association will please come to order. I want to say that we are very much honored to-night by the presence of a gentleman who has kindly consented to deliver the annual address to the Association; a gentleman who is so well known not only to this Association, but throughout the length and breadth of the land, his reputation for his scientific and scholarly attainments being an international one, and his genial personality is so well known to all who have had the privilege of personal contact with him, that no words of commendation from me would add anything to our knowledge of and regard for the speaker who is to address us—indeed he needs no formal introduction. Dr. Lewellys F. Barker, Professor of Medicine Johns Hopkins University, and Physician-in-Chief Johns Hopkins Hospital, will deliver the annual address on the subject of "The Relation of Internal Medicine to Psychiatry."

Dr. Barker then delivered his address, "The Relation of Internal Medicine to Psychiatry," which was greeted with prolonged applause.

DR. WAGNER.—Mr. President, we have listened to this splendid address, full of food for thought, as an Association and as individuals, and we are under great obligations to the distinguished speaker who has addressed us, for taking the time necessary to prepare such an address, from the great work he is doing in a great university, and delivering it here for us to-night. I think it has never been my pleasure to listen to a better, stronger, abler address than Dr. Barker has given us on this occasion, and I believe that I voice the sentiments of every one here this evening when I move a vote of thanks to Dr. Barker.

DR. BRUSH.—It gives me very great pleasure to second that vote of thanks. Naturally when the custom was established in this Association to ask some one not connected with the organization to deliver the annual address it was intended that we should be brought in contact with what was being done in the broad field of science outside of our peculiar line of work; no man who has ever addressed us has brought us more thoroughly in contact with what are the relations between our work and the work of internal medicine, than has been done by Dr. Barker to-night. I rise with peculiar interest to second this motion, because I congratulate myself both upon my good judgment and my temerity, especially my temerity; it may not be known to anybody except to Dr. Barker and myself, but some years ago I asked Dr. Barker to become my assistant. I think you will all commend my judgment, while possibly being surprised at my temerity.

**THE PRESIDENT.**—You have heard the motion made by Dr. Wagner and seconded by Dr. Brush. The Chair does not feel equal to saying anything that would add in any way to what Dr. Wagner has so well said in expressing the sentiments of this Association respecting our deep sense of obligation to Professor Barker for his able, interesting, instructive and scholarly address. All in favor of this motion will please signify it by rising.

Motion was unanimously carried.

Adjournment.

THURSDAY, MAY 28, 1914, 10 A. M.

**THE PRESIDENT.**—The Association will please come to order.

The first order of business is the report of the Council on the time and place of next meeting. We are not prepared to report on the time and place of the next meeting, but we will do so at a later session to-day. We will listen to the report of the Council.

REPORT OF THE COUNCIL MAY 28, 1914.

The Council recommends the election of the following named physicians to the associate class:

W. Palmer, M. D., Logansport, Ind.; Ernest M. Poate, M. D., New York, N. Y.; Robert F. Sheehan, M. D., Washington, D. C.

The Council has received the application for active membership of John T. MacCurdy, M. D., New York, N. Y. According to the constitution, final consideration will be deferred until next year.

Respectfully submitted,

CHARLES G. WAGNER, *Secretary.*

On motion, duly seconded and carried, the report of the Council was accepted and adopted.

**THE PRESIDENT.**—The next in order is the election of members proposed yesterday. The Secretary will read the names.

(This list is given in the report of the Council for Wednesday.)

**DR. HURD.**—I move that the Secretary be instructed to cast the ballot of the Association for the election of the physicians whose names have been presented.

Motion duly seconded and carried.

**THE PRESIDENT.**—The Secretary has cast the ballot of the Association as instructed, and these physicians are duly elected to membership in the Association.

The next order of business is the report of the Committee on Immigration, Dr. Brush, Chairman.



## REPORT OF COMMITTEE ON IMMIGRATION.

*To the American Medico-Psychological Association:* The following report, it is due to Dr. Salmon to say, is written by him and not by the chairman of the committee, and is presented as showing the status of the proposed changes in the immigration law in a very concise manner:

No federal immigration legislation has been enacted since the last meeting of this Association. A bill, which is very much similar in its important provisions to the one passed at the last session of Congress, but vetoed by President Taft, was passed in the House of Representatives and is now before the Senate. This bill includes nearly all the provisions recommended by this Association, but as it also contains a clause excluding illiterate aliens, the opposition to it has been very strong.

Before this bill was reported by the Senate Committee on Immigration, several events occurred which had a very material influence upon the provisions in which we are interested. Dr. Spencer L. Dawes, who had been appointed by Governor Dix of New York in 1912 as Special Commissioner on the Alien Insane, concluded his work in February and rendered a report to Governor Glynn. This report showed that the proportion of aliens in New York State institutions was far greater than had been before supposed. Dr. Dawes ascertained that of the 31,624 patients in New York State hospitals, 13,728 were foreign-born, and of the foreign-born, 9241 were aliens. He presented evidence to show that the cost of maintaining the alien patients amounted to more than \$1,830,000 a year. Dr. Dawes made recommendations which, in general, were similar to those adopted by this Association. Governor Glynn at once sent a special message on the subject to the New York State Legislature, making practically the same recommendations as those made by Dr. Dawes and urging the legislature to memorialize Congress for relief from the burden of caring for the alien insane. The legislature passed a resolution appointing a committee consisting of two state senators and Dr. Dawes to represent the State of New York before the various committees in Congress.

At about the same time a report of the Special Committee on Inquiry into the Departments of Health, Charities and Bellevue and allied hospitals was rendered. Part of this report dealt with alien dependents at Bellevue and allied hospitals and in the institutions of the Department of Charities. It was shown that the maintenance of dependent aliens, many of whom were admitted to hospitals a short time after their arrival, cost the city of New York more than \$1,000,000 annually. A great deal of publicity was given to the findings of these two commissions and so, when the Senate reported the bill it contained additional amendments serving to strengthen our defenses against the admission of insane or mentally defective aliens.

The bill at present before the Senate (H. R. 6060) has the following important provisions relating to this subject which do not exist in the present immigration laws:

1. Insanity is added to the conditions in immigrants for which a fine is imposed

2. This fine is increased to \$200.
3. Immigrants with constitutional psychopathic inferiority and with chronic alcoholism are added to the excludable classes.
4. Chronic psychopathic inferiority and chronic alcoholism are also added to the finable conditions.
5. Medical officers of the United States Public Health Service who have had especial training in the diagnosis of insanity and mental defect must be detailed for duty or employed at all ports of entry designated by the Secretary of Labor.
6. Such medical officers must be provided with suitable facilities for the detention and examination of all arriving aliens in whom insanity or mental defect is suspected.
7. Interpreters must be provided for this special service.
8. The period in which aliens who become a public charge from causes prior to landing can be deported is increased to five years and such aliens may be deported *at any time* if they become a public charge within the five-year period.
9. It is provided that it must be shown affirmatively that causes have arisen *subsequent* to landing to prevent deportation of such aliens being effected.
10. Suitable attendants must be provided to the final destinations of all deported aliens who are unable through mental or physical disease to care properly for themselves.

A strong public sentiment has developed in favor of these provisions. Hon. Lathrop Brown, a member of the House of Representatives, has sent a circular letter to each member of the American Medical Association urging that amendments of this nature be supported by the medical profession and resolutions have been passed by a number of state medical societies endorsing the changes proposed in the law.

There has been practically no opposition to the provisions in which this Association is interested, but opposition to the so-called illiteracy clause in the immigration bill has grown in volume rather than diminished. It is not likely that the proposed immigration bill will be defeated in the House or in the Senate, but there is said to be some possibility that any bill containing an illiteracy clause will be vetoed by the President. In case this occurs it will be highly desirable to have a bill containing only the provisions in which we are interested introduced in each house of Congress. Opposition to such legislation might come from those who are so much interested in passing the illiteracy clause that they would hesitate to have any other legislation advanced, but this is not likely.

It is apparent that members of this Association can aid in the exclusion of the insane and mentally defective by urging their friends in Congress to stand for the amendments which have been mentioned, in whatever bill they may appear, and to see that they are not eliminated from any bills introduced in the future.

A matter of much importance has been the greatly increased efficiency of the mental examination of immigrants at Ellis Island. Such members

of the Association as have visited Ellis Island lately cannot help being impressed by the earnest efforts which are being made there, in the face of the almost unsurmountable difficulties, to detect as many cases of insanity and mental deficiency as possible in the brief time which is allowed for the examination of each immigrant. A number of communications regarding this examination have appeared from time to time in medical journals and it is apparent that Ellis Island is becoming a great psychological laboratory in which many problems in the examination of the feeble-minded can be worked out.

It is suggested that the following resolutions, identical with those adopted by the American Genetic Association, be adopted by this Association:

*Resolved*, That the American Medico-Psychological Association respectfully urges upon the Senate of the United States the importance of the passage, at the present session of Congress, of an immigration bill similar to that which passed the House of Representatives on February 4, 1914 (H. R. 6060), embodying provisions which, if enacted into law, would unquestionably result in a more effective detection, exclusion and deportation of mentally and physically defective aliens, and in a general improvement in the character of our immigration.

*Resolved*, That copies of these resolutions be sent to the President of the United States, and to the members of the Committee on Immigration of the Senate.

Respectfully submitted,

EDWARD N. BRUSH, *Chairman*.

DR. BRUSH.—I would move, Mr. President, that these resolutions, be adopted by this Association.

THE PRESIDENT.—The report of the Committee on Immigration is before the Association for action, as is also the resolution just read. The Chair will entertain a motion for the adoption of the report, which shall include the resolution as read.

On motion, duly seconded, the report of the Committee on Immigration was accepted and adopted.

THE PRESIDENT.—The Chair will appoint the following Committee on Resolutions: Dr. H. W. Mitchell, of Pennsylvania; Dr. Wm. A. White, of Washington, D. C., and Dr. B. D. Evans, of New Jersey.

We are now prepared to proceed with the scientific part of the session. The first paper on the program is one which was left over from yesterday morning's session, entitled "Clinical Studies of Benign Psychoses," by Drs. August Hoch and George H. Kirby, of New York.

Dr. Hoch then read his paper, which was discussed by Dr. Wm. A. White.

**THE PRESIDENT.**—The next paper on the program is one by Surgeon L. L. Williams, Chief Medical Officer U. S. Immigration Station, Ellis Island, N. Y., by invitation.

Dr. Williams then read a paper entitled "The Medical Examination of Mentally Defective Aliens; Its Scope and Limitations." Discussed by Drs. Bancroft, Briggs, Salmon and Williams in closing.

**DR. WM. A. WHITE.**—Dr. Williams has come here as the result of our invitation, to give us this paper, which explains so clearly the situation on Ellis Island, and I think the American Medico-Psychological Association is deeply indebted to him for this paper. I move, therefore, that the Association extend a vote of thanks to Dr. Williams for his highly instructive and valuable paper.

**THE PRESIDENT.**—The Chair is pleased to put this motion, which I am sure voices the sentiments of the entire Association.

Motion was duly seconded and unanimously carried.

**THE PRESIDENT.**—Dr. Williams, the Association thanks you for your interesting and instructive paper.

The next paper on the program is "Some Notes on Expert Testimony by Alienists and Neurologists," by Drs. Carlyle A. Porteous and Hedley V. Robinson, of Montreal, which will be read in abstract by Dr. T. J. W. Burgess.

Dr. Burgess then read the above paper, which was discussed by Drs. Bancroft, Harrington, Evans, Briggs and MacDonald.  
Adjournment.

#### AFTERNOON SESSION.

HENRY PHIPPS PSYCHIATRIC CLINIC, JOHNS HOPKINS HOSPITAL.

At 1.15 p. m., luncheon was served at The Johns Hopkins Hospital for the members of the Association and their friends.

The Association was called to order by the President.

**THE PRESIDENT.**—There were three papers on the program for this morning which were not read; two of them will be read by title and will appear in the *Transactions*; these are: "The Establishment of Training Schools for Attendants (now nurses) in Asylums (now hospitals) for the Insane at McLean Hospital and Buffalo State Hospital, 1882-1886," by Wm. D. Granger, M. D., New York, and "The Modern Treatment of Inebriety," by Irwin H. Neff, M. D., of Foxborough, Mass. The third one, by Dr. Orton, will be postponed until the evening session, as it seems

desirable and proper to devote the session this afternoon to the work of the clinic here.

The first order of business is the report of the Committee on Psychology in the Medical Schools, Dr. E. Stanley Abbot, Chairman.

#### REPORT OF THE COMMITTEE ON PSYCHOLOGY IN THE MEDICAL SCHOOLS.

*To the American Medico-Psychological Association. Gentlemen.*—The Committee on Psychology in the Medical Schools has not been inactive, but is prepared to make only a preliminary report at the present time.

For many unavoidable reasons the investigation of the results, present status and future possibilities of teaching psychology to medical students has not been carried far enough to warrant report this year. The importance of such teaching has been brought to the attention of medical schools by the following methods:

Dr. Franz, a member of this committee, as chairman of a somewhat similar committee of the American Psychological Association, prepared a report to that Association very strongly recommending the introduction of psychology into the medical curriculum. Reprints of that report were sent last November to each medical school in this country. In December, a reprint of Dr. Abbot's paper on the subject, with a leaflet calling attention to Dr. Franz's report, was sent to at least three members of the faculties of each of the Class A +, Class A, and Class B Medical Schools. In February a reprint of an address by Dr. Franz before the St. Louis Medical Society, on "Psychological Factors in Medical Practice," was sent to each of the medical schools. There has been some response to this repeated attack. Committees on psychology in the medical schools were appointed by two other organizations—the American Psychological Association and the American Psychopathological Association—with which your committee has been co-operating. Your committee met in December and in April and discussed at length the content of a course in psychology for medical students, each member having been asked to submit a brief outline of what he thought should be included in such a course. Not all members could attend. As a result of the discussion your committee decided that it was more expedient, on account of the widely different men, view-points and facilities for teaching in the different schools, not to elaborate and recommend any specific outline at the present time. But your committee was strongly convinced that psychology should be taught in the medical schools; that in view of the fact that the medical curriculum is already well filled, the subject matter and the methods of presentation should be selected carefully, and solely with regard to their applicability to the problems of the physicians; that for this reason the course should be given not by a psychologist without medical experience, but preferably by a psychiatrist interested in psychology, or by a psychologist familiar with mental abnormalities and diseases, and interested chiefly in the higher mental activities; and that the course should be given under the direction of the department of psychiatry.

Since there is yet so much work to be done in carrying out the purpose of this committee, and since its objects cannot be accomplished until the teachings of psychology become general, and since, until then, the subject will need frequent presentation and agitation, it is recommended that the same committee be continued, or a similar one appointed, with powers to co-operate with any other person, committee or association having similar objects in view.

Respectfully submitted,

E. STANLEY ABBOT, *Chairman.*

**THE PRESIDENT.**—The Chair would announce that the request of the committee that they be continued, with power to act, is ordered, believing that this will meet the views of the Association.

We will now commence the regular program for the afternoon, which will be given by the members of the staff of the Phipps Psychiatric Clinic. The first item on the program is "Organization of the Work of the Clinic, with Special Reference to the First Year's Work," by Adolf Meyer, M. D., of Baltimore, Md.

The following communications were then read by members of the staff of the Henry Phipps Psychiatric Clinic:

"Organization of the Work of the Clinic, with Special Reference to the First Year's Work," by Adolf Meyer, M. D.

"A Review of the First Year's Work of the Dispensary of the Phipps Clinic," by Charles Macfie Campbell, M. D.

"Korsakow's Psychosis Occurring During Pregnancy," by David K. Henderson, M. D.

"The Colloidal-Gold Test," by Sydney R. Miller, M. D.

"A Biological Interpretation of Conflict of Instincts and Emotions Applied to Some Problems in Human Behavior," by E. J. Kempf, M. D.

"A Study of the Defectives of School Age," by R. C. Hall, M. D.

"A Case of Obsessions," by Henri Flournoy, M. D.

**THE PRESIDENT.**—This concludes the scientific program of the afternoon.

**DR. RICHARD DEWEY.**—Mr. Chairman, I ask the privilege of offering the following resolution, and moving its adoption:

The members of the American Medico-Psychological Association desire to express their appreciation of the privilege of inspection of the Henry Phipps Psychiatric Clinic; of listening to papers and demonstrations of high scientific value, and of partaking of a most enjoyable luncheon.

They recognize that the equipment of the clinic in men and in apparatus places it in the first rank and forms a possession of inestimable value

for education in psychiatry, and at the same time accomplishing a noble humanitarian work.

THE PRESIDENT.—You have heard the resolution, all who are in favor will please signify by saying aye.

Carried.

THE PRESIDENT.—The Secretary will so record.  
I now declare this session adjourned to meet this evening at Osler Hall.

### EVENING SESSION.

#### OSLER HALL.

THE PRESIDENT.—The Association will please come to order. The first order of business is the report of the Council, which was deferred from the morning session.

#### REPORT OF COUNCIL MAY 28, 1914.

The Council has received the applications of the following named physicians for active membership. In accordance with the constitution, final consideration will be deferred until next year:

Alfred O. Lewis, M. D., Philadelphia, Pa.; Charles E. Ross, M. D., Wichita, Kans.

The Council makes the following recommendations:

That the Association return to the former method of publishing the *Transactions*, viz., that in use previous to 1913.

That on and after June 15, 1914, the work of preparing the index to the *AMERICAN JOURNAL OF INSANITY* be suspended until further notice; that a letter be sent to each member of the Association by Dr. Brush, in order to determine the approximate number of volumes of the index that will be required when published, and to advise the Secretary thereof.

That the Treasurer be authorized to pay the bill of the Committee on Diversional Occupation, on account of the exhibit, amounting to \$125; also \$30 for the use of Osler Hall.

That the annual meeting of the Association in 1915 be held at Old Point Comfort, Va., the date to be determined by the President and the Secretary later when it can be ascertained what dates can be assigned to the Association by the hotel management.

Respectfully submitted,

CHARLES G. WAGNER, *Secretary*.

DR. BURGESS.—I move the report of the Council, as read by the Secretary, be adopted.

Which motion was duly seconded and carried.

THE PRESIDENT.—We will now proceed to the scientific part of the session this evening. The first item on the program is the symposium

on Eugenics, of which Dr. Wm. Mabon, of New York, is the chairman; Dr. Mabon have you any report to make on the subject?

DR. MABON.—If my recollection serves me right this committee was not expected to make a report. At the meeting at Niagara Falls last year a report was submitted by the chairman of the committee, Dr. Hubert Work. As a result of the discussion of the subject a committee was appointed to prepare a symposium on Eugenics. I believe that the report of the committee represents very largely the views of this Association and is of far-reaching importance. In the preparation of the program of the evening we asked Dr. Work to present a paper, but Dr. Work unfortunately is unable to be here and I have with me his communication, which I now beg to submit, with the approval of the President.

The following papers were read, the first three of which composed the symposium on "Eugenics":

"Legislation in Reference to Sterilization," by Hubert Work, M. D., Pueblo, Colo. Read by Wm. Mabon, M. D., New York, N. Y.

"Applied Eugenics," by Sanger Brown, M. D., Kenilworth, Ill.

"Some Aspects of the Problem of Mental Deficiency," by Max G. Schlapp, M. D., New York, N. Y.

"Insanities in Children," by John H. W. Rhein, M. D., Philadelphia, Pa.

THE PRESIDENT.—This concludes the papers for the evening session and they are now before the Association for discussion; are there any remarks? The Chair realizes that owing to the lateness of the hour and the prolonged sessions we have had to-day there is not much incentive to prolong discussions of the subjects to-night.

DR. BANCROFT.—Owing to the lateness of the hour I would like to suggest that, if it would be proper, we have the discussion on the subject of Eugenics to-morrow morning.

THE PRESIDENT.—The Chair would like very much to hear discussions on these papers, but it fears that it will not be feasible to take time for the purpose to-morrow morning; our meeting closes at noon and we have a number of papers on the program that should be read. I would suggest, therefore, in view of the number of papers we have to dispose of to-morrow morning, that we commence the session promptly at 10 o'clock.

If there are no further remarks a motion to adjourn is in order.

Adjournment.



FRIDAY, MAY 29, 1914, 10 A. M.

The meeting was called to order by the President.

THE PRESIDENT.—The first thing in order is the report of the Council, which will be read by the Secretary.

REPORT OF THE COUNCIL FOR MAY 29, 1914.

The Council has received the application for active membership of J. F. Wen Glesky, M. D., Milwaukee, Wis. According to the constitution, final consideration will be deferred until next year.

The Council makes the following recommendations:

That the incoming President be authorized to appoint a Program Committee and a Committee of Arrangements for the next annual meeting.

That the dues for the ensuing year be fixed at the usual rates, viz.: Five dollars for active members, and two dollars for associate members.

That in future the Nominating Committee shall nominate as a member of the Council, for a term of three years, the retiring President.

Respectfully submitted,

CHARLES G. WAGNER, *Secretary*.

On motion, duly seconded, the report of the Council was accepted and adopted.

THE PRESIDENT.—The next order of business is the election to membership of the candidates proposed yesterday. The Secretary will read the names.

(This list is given in the report of the Council read at the Thursday morning session.)

On motion, duly seconded and carried, the Secretary was instructed to cast the ballot of the Association electing these physicians to membership.

THE PRESIDENT.—The Secretary has cast the ballot of the Association and the candidates whose names were read are hereby declared elected.

We will now hear the report of the Committee on Diversional Occupation of the Insane, Dr. Wm. Rush Dunton, Jr., Chairman.

REPORT OF THE COMMITTEE ON DIVERSIONAL OCCUPATION.

*Mr. President and Gentlemen:* Soon after its appointment your Committee on Diversional Occupation formed plans for the exhibition and for a *questionnaire* similar to that used last year, but containing several additional questions. The former questions were again asked, as they had not been answered by a number of institutions, and it was hoped that improved conditions would make new answers necessary for those who had already replied. This *questionnaire* was sent January 2 to all

of the institutions named in the secretary's list of members. These may be classified as follows:

State .....	155
County .....	9
City .....	6
Private .....	77
Incorporated .....	16
Epileptic .....	8
Feebleminded .....	9
Inebriate .....	2
Tuberculosis .....	1
Undifferentiated .....	4

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It was requested that replies and applications for exhibition space be made by March 15. By May 1 replies had been received from but 27 institutions and our hopes of making a complete report of occupation in all institutions were dashed.

Acting upon the suggestion of the chairman of last year's committee, the *questionnaire* was again sent to all the state institutions with an additional explanatory note printed on a different colored paper. This brought 39 more replies. We have had access to the replies to last year's *questionnaire* and find they number 107. Of these 42 answered this year, so that we have information from 131 of 287 institutions, or about 48 per cent. It seemed useless to attempt to make several summaries, which had been planned, as the results would be too inaccurate. Our conclusions are therefore fewer than would have been the case if we had received replies from the majority of institutions. It seems necessary that there be some agreement as to what is meant by "diversional occupation." From the replies received it would appear that we are far from being unanimous on this point. Some restrict the term to "fancy work," others include all forms of work.

Question 6 was as follows:

"What is your opinion concerning the value of diversional occupation as a means for treating the unwilling workers, such as dementia præcox cases, acute cases that are not allowed the privilege of the grounds, and the senile cases who are not physically able to perform routine work?"

Of this year's 66 replies, nine did not understand the question, did not answer it, or for some reason were not qualified to speak, leaving 57, of whom all but four spoke with more or less enthusiasm of the benefits to be derived from occupation. The majority regard occupation as especially valuable in the treatment of dementia præcox and of less value in senile cases.

The committee is quite aware that to answer their *questionnaire* requires some physical and mental effort, but it is not a very great one and is surely compensated by the "stock taking" and knowledge one gets of conditions in this respect. We are grateful to all who have made this

effort and hope that those who have not yet answered the *questionnaire* will do so. For it is hoped that the information which has been received may yet be elaborated.

It is believed that so far the affirmative side has been heard from and that those opposed have kept quiet. We hope that they will now speak up.

It may be remembered that in the discussion following the presentation of last year's report Dr. White, of the Government Hospital, said that nothing had been said about the scientific aspect of the diversional occupations and raised the point "that in all of these hospitals that are doing this diversional occupation there are very few who are investigating the mechanisms of recoveries, and until we know what the mechanisms of recoveries are we cannot apply any therapeutic agency to bring about recovery, except by a hit-and-miss method."

Probably many will agree that we do not know the mechanism of recovery in all of our cases, but many of us know that occupation aids in all cases where it is helpful by replacement. The patient's attention is necessarily focused on the task being performed and the depressive or other ideas are therefore less prominent. Gradually the patient takes an interest in the work, the ideas go still further into the background and finally disappear. In cases of dementia præcox we also have a replacement. The same applies to excited states where the purposeless restlessness is replaced by purposeful movements.

We believe that this criticism of Dr. White's is most helpful. He was one of the first to reply to this year's *questionnaire* and referred us to his reply of 1913. His reply to question 6 is as follows:

"My opinion concerning the value of diversional occupation for treating the unwilling workers is that we lack facts which will warrant any exact statement of the value of occupation for any class of the insane. The matter has been dealt with in an unscientific manner, and it is my belief that before we discuss it too much we need to make more observations, or to publish the observations which we have made. General impressions do not take the place of exact observations, and we have tried in our laboratory here to begin the latter kind of work. At present we have not sufficient data to answer the question."

We hope that the laboratory work above alluded to will give us more exact knowledge.

#### EXHIBITION.

With this year's exhibition is inaugurated several competitions. It was thought that these might stimulate more careful observation and consequent improvements in methods.

The hospitals exhibiting are:

Crownsville State Hospital.  
Spring Grove State Hospital.  
Springfield State Hospital.  
Raleigh State Hospital.  
Boston State Hospital.  
Manhattan State Hospital.  
Monson State Hospital.

Taunton State Hospital.  
Kings Park State Hospital.  
New York State Hospitals.  
Ohio State Hospitals.  
Bloomingdale Hospital.  
Sheppard and Enoch Pratt Hospital.  
Mercer Sanitarium.

We believe that these exhibitions are helpful in stimulating interest in this work and that they should be continued. J. L. Hammett & Co., of Boston, were invited to exhibit the methods and materials for occupation.

Your committee recommends that it be continued, with broader functions than it has had heretofore; that it be made a clearing-house or bureau of information, and that one of the committee be appointed secretary, to whom any one may write for information about the subject. We would suggest that a grant of \$10 be made to meet the expenses of such service.

Your committee also commends the Maryland Psychiatric Quarterly for its department of Occupation and Amusements.

The committee desires to thank Miss Sarah Ireland, Miss Eleanor I. Sweringen and Miss Vernice Townsend Porter for acting as judges.

Certificates have been awarded to those exhibiting, as follows:

#### STATE HOSPITALS.

Crownsville State Hospital for the best exhibit.

Crownsville State Hospital for the best craft willow work, lathe turning, tied work, cross stitch embroidery, corn-husk work, oak splint baskets, rustic work and hand-made rugs.

Taunton State Hospital for the best craft leather work, punched brass, burnt wood, brushes, loom-woven rugs, ash baskets and hooked rugs.

Monson State Hospital for the best rake knitting.

Kings Park State Hospital for the best raffia work.

Kings Park State Hospital for the best photographs of work rooms.

Spring Grove State Hospital for the best willow work (commercial), embroidery and crocheting.

Willard State Hospital for the best shoes and leather work.

Central Islip State Hospital for the best paper flowers.

Manhattan State Hospital for the best schedule of handicraft classes.

Manhattan State Hospital for the best schedule for an individual patient.

Manhattan State Hospital for the best stencilling, illuminating and tatting.

Springfield State Hospital for the best work of an individual patient.

Springfield State Hospital for the best reed work.

#### INCORPORATED HOSPITALS.

Bloomington Hospital for the best exhibit.

Bloomington Hospital for the best weaving, raffia work, wood work, embroidery, crocheting and cement work.

The Sheppard and Enoch Pratt Hospital for the best reed work, stencilling, block printing, wooden toys, bookbinding, leather work, paper work, printing and all (4) groups of metal work.

The Sheppard and Enoch Pratt Hospital for the best schedule for an individual patient.

The Sheppard and Enoch Pratt Hospital for the best schedule of handicraft classes.

## PRIVATE HOSPITALS.

The Mercer Sanitarium for the best weaving and cement work.

The Mercer Sanitarium for the best photograph of a work room.

Respectfully submitted,

W. R. DUNTON, JR., *Chairman.*

CHAS. T. LAMOURE,

W. W. RICHARDSON.

THE PRESIDENT.—You have heard the report of the Committee on Diversional Occupation; what is your pleasure in regard to it?

DR. S. E. SMITH.—I move that the report be accepted and that the committee be discharged. While it is not the idea to discontinue having a committee on diversional occupation, it would seem proper to have such a committee appointed by the Chair with reference to the place of meeting, and that the chairman of the committee shall reside in the immediate vicinity, as it requires a great deal of time and attention to arrange these exhibits, so the motion for the discharge of the present committee is not to be regarded as expressing any dissatisfaction with the committee, for it seems to me that this is the best exhibit we have ever had.

THE PRESIDENT.—In this connection perhaps it would be proper for the retiring President to suggest that we adopt a resolution providing, in substance, that at the beginning of each annual meeting the President shall appoint a committee of three members on awards, who shall pass upon these exhibits; that this committee shall consist of persons who are not directly or indirectly interested in the exhibit, *i. e.*, no member of the committee shall be a representative of a hospital having an exhibit, so that the committee would be entirely free from bias or partiality in the awards which they might make. The Chair would be very glad to entertain a motion to that effect.

DR. DUNTON.—I would like to raise the point that every member who is sufficiently competent to judge on these things is likely to have an exhibit, and I do not know of any member of the Association who is as competent to act as a judge as some person who is directly or indirectly interested in handicraft. I think if it were possible to have that committee consult with, or invite others to act as judges with them, it would be a good idea. I would make a resolution as you have suggested, giving that committee the power to call in any others they may desire to aid them in acting as judges.

THE PRESIDENT.—The Chair would state that such a committee would be entirely free to consult or advise with persons who were familiar with handicrafts. It would seem that a committee of the Association superintendents ought to be competent to pass upon these exhibits, and there would be nothing to prohibit their calling for advice from others.

DR. S. E. SMITH.—I noticed this morning that certificates of award are placed about the exhibition room, bearing the seal of this Association, and signed by persons who are not members of the Association. Unless the Association has taken some action in this matter, I feel that I am obliged to raise a question in regard to using its seal in a matter of that kind without authority. I agree that awards for exhibits be made by a resolution, as has been suggested, but feel obliged to raise a question about the propriety of the action in this instance.

THE PRESIDENT.—The attention of the President and Secretary was called to that fact this morning, viz., that the awards bearing the seal and name of the Association and signed by a committee of several ladies who are not members of the Association, had been made, although not, I am sure, with any desire on Dr. Dunton's part to transcend his duties. It would seem to me that these awards, if made and certificates issued, should have the stamp of authority of a committee of the Association, authorized by the Association; it certainly would add very much to the value of the awards, at least I should so regard it if I had an exhibit. While no criticism of the present committee is implied or intended, the Chair made the suggestion that a resolution be offered providing for this committee in the future, with the object of avoiding any such complication in the future.

You have heard the motion that the report of the Committee on Diversional Occupation be accepted and the committee discharged—all in favor say aye.

Carried.

THE PRESIDENT.—I would like to add, with the thanks of the Association.

We will now proceed with the scientific part of the program.

The following papers were read:

"The Present Status of the Application of the Abderhalden Dialysis Method in Psychiatry," by Samuel T. Orton, M. D., Philadelphia, Pa.

"Insanity with Cerebral Disease," by H. P. Sights, M. D., Hopkinsville, Ky.

"Epileptic Dementia," by Alfred Gordon, M. D., Philadelphia, Pa.

"The Translation of Symptoms into Their Mechanism," by C. L. Carlisle, M. D., Kings Park, N. Y.

"Some Remarks Upon the Methods and Results of Study of the Psychopathies of Children," by L. Pierce Clark, M. D., New

York. Discussed by Drs. Meyer, Schlapp, Williams, Miss Lathrop, Miss Farrell and Dr. Clark in closing.

"The Prevention of Suicide, with Cases Illustrating Methods," by Tom A. Williams, M. D., Washington, D. C.

THE PRESIDENT.—The Chair is exceedingly sorry to curtail the reading of any paper or to cut off discussion, but owing to the lateness of the hour and the fact that our incoming President is obliged to take the 1.25 p. m. train, we shall be obliged to do so at this time in order to install him in office before his departure for home.

DR. DUNTON.—I would like to offer the following resolution at this time:

*Resolved*, That a committee of three be appointed by the President of the Association, to act as judges of any work which may be submitted in competition in the Diversional Occupation exhibit; these to be empowered to consult with any technical expert they may desire.

DR. SWIFT.—I move the adoption of this resolution.

DR. ENGLISH.—Is this certificate to be an official one from the Association?

THE PRESIDENT.—I understand that the Association contemplated in the resolution that the committee of three members of the Association shall have authority to issue a certificate or diploma, or whatever you are pleased to call it, to successful exhibitors.

Motion duly seconded and carried.

THE PRESIDENT.—We will now hear from the Committee on Resolutions.

DR. H. W. MITCHELL.—The committee offers the following resolution, accompanied by the verbal statement that this resolution in no sense expresses our grateful appreciation to those who have made our meeting this year so pleasant and profitable:

WHEREAS, The arrangements for the Baltimore meeting of the American Medico-Psychological Association have been so elaborately devised and satisfactorily carried out by the Committee of Arrangements, who have given so generously in their efforts to promote the best interests of the meeting and the enjoyment of the members and their guests, as to make the 1914 session one of the most instructive and enjoyable in the memory of those present; and

WHEREAS, The medical profession, public officials, local institutions, citizens of Baltimore, and the Hotel Belvedere management have so effectively contributed in their several ways, to second the work of the committee; therefore, be it

*Resolved*, That the thanks of the Association, in no perfunctory sense, be extended to all the persons and organizations co-operating under the

leadership of Dr. Wade and his committee aids, in making this meeting memorable both for its professional excellence and the exhibition of generosity and hospitality for which the region and people have been so justly famed.

H. W. MITCHELL,  
WM. A. WHITE,  
BRITTON D. EVANS,  
*Committee.*

DR. SMITH.—I move the adoption of the resolution.

Which motion was duly seconded and carried.

THE PRESIDENT.—The time has now arrived for the induction of the President-elect. This to me is a particularly pleasing event, as it means my relief from official responsibilities and cares, while it is an added pleasure to be succeeded by Dr. Smith. Dr. Smith, will you kindly come to the front. (Applause.) The time has arrived when, in accordance with a time-honored custom, I must lay aside the mantle of authority with which the Association honored me last year, and in obedience to unanimous mandate, transfer the same to your shoulders, which I have much pleasure in doing, knowing that you are fully qualified by training, experience and native equipment for the duties and responsibilities of the office of President, and I need not assure you that you are entering upon the office with the good will and best wishes of each and every member of the Association. I welcome you to the great office which you now assume, and salute you as President of the American Medico-Psychological Association for the ensuing year, and I trust that the meeting of the Association next year, over whose destinies you will preside, may prove even more successful than the one which now closes with your induction into office.

THE PRESIDENT-ELECT.—I thank you for your gracious words of introduction.

*Members of the Association:* You have conferred upon me a very great honor and placed me in a position of great responsibility, and I sincerely hope that you will believe me when I tell you that I appreciate both. No higher honor has ever come to me; to my mind this is the highest honor in the medical profession. This new responsibility means that I must devote some time and attention to the welfare of the Association and in the preparation of the business for the next session, which will be held at Old Point Comfort; to this I shall devote my best efforts, and with the assistance of our very able and efficient Secretary, Dr. Wagner, I sincerely hope that we may at least place the next meeting in the class with this one. It has reached such a standard of excellence under Dr. MacDonald, Dr. Wagner and our able Committee of Arrangements, that I cannot hope to see it excelled. I can only ask you, then, to accept



the simple word of thanks, indicating a heart full of gratefulness for the honor you have conferred upon me.

I hope to meet you all in Old Point Comfort next year, and I trust that the meeting may be one of much interest and profit to us all. (Applause.)

DR. SMITH.—Is there any further business to come before the meeting?

DR. MACDONALD.—I desire to move a special vote of thanks to our Secretary, Dr. Wagner, for the very valuable services he has rendered to the Association in the past and especially during this meeting, and to say that he is entitled to a large measure of credit for the success of the same. I would also include in the motion the thanks of the Association to Miss Bloxham, the Secretary's accomplished assistant.

Motion duly seconded and carried.

DR. SMITH.—If there is no further business to come before the Association, I declare the Seventieth Meeting of this Association adjourned without date.

CHARLES G. WAGNER, *Secretary*.

## PRESIDENTIAL ADDRESS

By CARLOS F. MacDONALD, M. D.

*Mr. Vice-President, Fellow Members of the American Medico-Psychological Association, Ladies and Gentlemen:* The fact that so many of my predecessors have prefaced their presidential addresses by referring to the difficulty of finding a pertinent subject which had not already been traversed on like occasions, affords me at least the sanction of precedent for referring to the difficulty I have encountered in casting about for a subject, or subjects, upon which to address you on this occasion, in conformity with time-honored custom and in obedience to a constitutional mandate which requires your president to "prepare an inaugural address to be delivered at the opening session of the meeting."

With a realizing sense of their imperfections, I venture to offer a few cursory generalizations on topics which, it seemed to me, might prove of interest, even though they may be somewhat trite and possibly threadbare.

The fact that this is the seventieth anniversary of the organization of our association would seem to warrant the indulgence in a brief reminiscence respecting its organization and progress, even at the risk of suggesting to your minds the idea that the reminiscent-age and dotage are synonymous terms.

Originally organized in 1844, under the somewhat elongated and not over-euphonious title of Association of Medical Superintendents of American Institutions for the Insane, and subsequently, in 1892, rechristened The American Medico-Psychological Association, thus wisely widening its scope and purpose, and opening its portals of membership to all medical officers of institutions for the insane in the United States and British America, and to other specialists in psychiatry and neurology, it stands to-day the oldest society on the western hemisphere devoted to the interests and welfare of the insane, and to the scientific study of psychiatry and allied subjects.

The association, whether under its original or present title, has always been a progressive body and has attained a prominence

both in point of numbers and in the character of its scientific work, second to none in the world.

Its roll of membership, both past and present, is a long and honorable one to which we may point with pardonable pride, embracing as it does the captains of psychiatry of the United States and Canada, not to mention its list of distinguished and eminent honorary members in Great Britain and continental Europe.

Seventy years ago the medical men in the United States and Canada who were practically familiar with the subject of psychiatry, as it was then understood, numbered less than a score; that is, men with definite ideas of and practical experience in the care and treatment of the insane—ideas and experiences which can only be acquired by daily personal contact with patients in institutions for the insane. At that time the field of American psychiatry was a *terra incognita*—an unexplored wilderness, so to speak—through which the votaries of mental medicine had as yet scarcely blazed a trail. All honor then, to the original 13 pioneer founders of our association, who met on that memorable occasion, three score and ten years ago, and inaugurated a movement which practically consummated the birth of the specialty of American psychiatry—this at a time, too, when medical practitioners were wont to look askance at all specialties.

The organization of this association marked a distinct epoch in the progress of psychological medicine, the force and increasing influence of which have been felt throughout the civilized world. As a tree is known by its fruit, so are the labors of those 13 broadminded, far-sighted, philanthropic men who, as superintendents of hospitals for the insane, or “lunatic asylums” as they were then called, met in the city of Philadelphia on October 16, 1844, and organized the Association of Medical Superintendents of American Institutions for the Insane, better appreciated and understood in the light of the scientific work that has been done and is being done under the fostering ægis of the American Medico-Psychological Association.

It is well that we should pause and take note of the work of those earnest, and in many instances brilliant, men whose rare genius and devotion did so much to advance the cause to which their years of usefulness were dedicated, and that we should realize the far-reaching influence for good which has resulted

from their unselfish efforts in behalf of our mentally afflicted fellow-men. May a knowledge of their labors engender in us, and in our successors, an increasing desire to uphold the standards and measure up to the high ideals which they established.

Of these revered nestors of our specialty, it may truly be said, "They builded better than they knew." They laid a firm and deep foundation upon which their successors have erected a permanent superstructure of psychiatry which shall stand, let us hope, despite the visionary efforts and phantasmagoric distinctions of a small coterie of followers of the new-thought psychiatry, which, happily, is already beginning to wane, and the essence of which is dream misinterpretations based on the untenable theory of repressed memories of sexual traumas in infancy or in intrauterine life.

We, the members of this association, in this, our seventieth natal year, may point with pardonable pride to its traditions and to the rich legacies bequeathed to us by such men as Isaac Ray, Thomas S. Kirkbride, Luther Bell, C. H. Stedman, John S. Butler, Amariah Brigham, Pliny Earle, William M. Aul, Francis T. Stribling, John M. Galt, Nehemiah Cutter, Samuel B. Woodward, Samuel White, and a host of other distinguished men who came after them and who have left an indelible imprint of their greatness upon the annals of our association.

Prominent among the galaxy of conspicuous names of members who have since passed on, may be mentioned John E. Tyler, John P. Bancroft, Charles H. Nichols, Edward Jarvis, Andrew McFarland, John Curwen, John P. Gray (whose untimely death was indirectly caused 'by a madman's bullet'), Richard Gundry, Orpheus Everts, Joseph Workman, John W. Sawyer, Peter Bryce, John H. Callender, Judson B. Andrews, Alexander E. Macdonald, and many others, who, by their contributions to psychiatry, have attained rank and fame in our specialty.

When we recall the beneficent deeds of these departed members it is borne in upon us that they did not live in vain, and that the world, especially the mentally afflicted part of it, is better for their having lived and labored in it.

The late Dr. Curwen, in his presidential address to the association on its fiftieth anniversary, referring to its founders, prophetically said: "Actuated by motives and principles of the highest philanthropy they initiated movements which have stead-

ily advanced and are still advancing with a force and momentum which will gradually overcome all obstacles, and give a consistence and permanence to all matters pertaining to the care of the insane, which will eventually issue in the most enduring and beneficent modes of relief."

Among the more important of the numerous questions pertaining to the care and treatment of the insane and the management of institutions therefor which have received the attention of the association since its organization may be mentioned:

The construction, organization and government of hospitals for the insane; the statistics, classification and medical and moral treatment of the insane, including nursing, occupations and diversions; support of the dependent insane; provision for the criminal insane; provision for colored insane; the causes and prevention of insanity; comparative advantages of treatment in hospitals and private practice; the establishment of schools for certain classes of patients; the use of mechanical restraints; the correspondence of patients; the care of patients at night; the open-door system; the cottage system for hospitals; the pathology of insanity; the establishment of psychopathic buildings for acute cases; nurses' homes; the admission of visitors to the wards of hospitals; the examination and commitment of the insane; parole of patients; state care of the insane; asylums for idiots; the nature and treatment of alcoholic insanity; the evils of political control of institutions for the insane; fire protection; dietetics; warming and ventilation of institutions; the medico-legal relations of the insane; medical expert testimony; teaching of psychiatry in medical schools; qualifications of officers of hospitals for the insane; dual heads for hospitals for the insane, etc. These are but a few of the practical questions which have received the serious consideration of the association, many of which have been backed up by the adoption and promulgation of resolutions defining its attitude respecting them. Finally, during its existence practically every subject relating to lunacy administration, modern psychiatry and allied subjects have been brought before the association in original papers and committee reports contributed and discussed by its members.

I have endeavored in these somewhat discursive remarks to outline briefly the good work accomplished by our early psychia-

trists in establishing the association which for 70 years has stood for all that is best in mental medicine and in the care and treatment of the insane.

### THE MENTAL DEFECTIVE PROBLEM.

Among the many live questions confronting the body politic to-day, there probably is none that rivals in importance, or none the solution of which promises greater benefit to the human race, whether viewed from a sociologic, philanthropic, or economic standpoint, than that of determining and rendering effective, the best method of drying up the streams that produce the defective and delinquent classes now so prevalent in every state and country. Nor is there any public problem that calls for more serious consideration and co-operation of the scientist, the political economist, the legislator, the taxpayer, and the humanitarian, than that of the custodial care and control of that vast army of mental defectives, large numbers of whom are to be found in every community, many of them unrecognized, where they are not only a disturbing element in the social fabric, but a menace to the public peace and safety, not to speak of the enormous pecuniary burden which their existence imposes upon the commonwealth. And while the problem of the feeble-minded—the mental sub-normals—may never be solved in its entirety, it is the consensus of scientific opinion that it is first in importance of all public questions of the day, and that interest in the mental status and welfare of children is steadily widening, while the need of trained experts to determine the causes and methods of prevention of their mental and moral deficiencies is becoming more and more apparent.

Owing to the fact that no really accurate census of the feeble-minded has been taken by the United States Government, or by any state, it is possible to determine the number of mental defectives in this country only approximately; the nearest approach to accuracy that can be made respecting the relative proportion of the feeble-minded to the whole population, as suggested in a report recently made to the State Charities Aid Association of New York,\* is to base such estimate upon a comparatively pains-

\* The feeble-minded in New York, by Anne Moore, Ph. D., 1911.

taking investigation recently made by the English Royal Commission. This commission estimated that "in Scotland there was one mentally defective person to every 400 inhabitants; in England, one to every 217; and in Ireland, one in every 175." Dr. H. H. Goddard, of the Training School for Mental Defectives, at Vineland, New Jersey, avers that it is reasonable to assume that there is at least one mental defective to every 300 of the population of that state.

It is estimated that in the United States, with a population of more than 90,000,000, the number of mentally defective persons is approximately 300,000. Of this number, according to the most conservative estimate, there are in the United States to-day 150,000 to 200,000 incurable defectives who are unfit for social life or for the propagation of their kind.

Of this vast multitude of defectives, an estimated number of 10 per cent are in public and private institutions, the remaining 90 per cent being at large, and practically unrestricted, some being in the public schools, where they are always mis-fits, and some at work, while the remainder comprise largely the idlers, the tramps, the vagabonds, the prostitutes, the inebriates and the criminals.

Recent investigations had in the state of New York have shown that there are in that state approximately 30,000 feeble-minded or mentally defective persons, or one in about every 300 of the population. Of these, in round numbers, less than 5000 are in institutions established for their care; 7000 are confined in institutions not intended for their care; and the remainder, about 18,000, are at large, and free to reproduce their kind, thus perpetuating the race-menace of increasing feeble-mindedness, and liable to commit murderous assault, arson, and crimes of sexual perversion, etc. It is estimated that there are in that state, at least 10,000 feeble-minded women and girls of child-bearing age, of whom more than 5000 are at large in the community, many of them leading immoral lives.

Within the past two years a clearing house for mental defectives has been established by the commissioner of charities of New York, under the direction of Dr. Max G. Schlapp, assisted by a staff of psychiatrists and psychologists, as an accessory of the Department of Public Charities, for the purpose of determining the final disposition of mental defectives and endeavoring to

solve the problem of the classification, segregation, and the proper care and control of that constantly increasing class of our population—a purpose the importance of which could scarcely be overestimated.

The clearing house, although still in its infancy, and maintained largely by voluntary contributions, has already rendered a great public service in registering and disposing of thousands of the city's mentally unfit, according to their several needs. This institution, the operations of which I have personally observed, is a veritable hive of scientific industry. Patients are referred to it from the schools, from the children's courts and from various charitable and philanthropic societies, while many of them are brought there by their relatives or friends. At present there are 147 charitable and other institutions, exclusive of the children's court, hospitals and public schools, that send patients to the clearing house for examination and report. These patients are subjected to most careful scientific, mental and physical tests. The mental or psychological test—that is, the test to determine the patient's mental age or intelligence, as compared with his chronologic age—is made by the Binet-Simons method. This method enables the examiner to determine with reasonable certainty the mental status of the subject, that is, the degree of his mental development, and to classify him accordingly. At the same time the family history is inquired into, with reference to the existence in the ancestry of a neuropathic or psychopathic taint, such as insanity, epilepsy, feeble-mindedness, alcoholism, criminality, moral obliquity or other prenatal influence. Inquiry is also made in respect to the personal history of the patients from infancy, especially with reference to their mental peculiarities, scholarship, occupations, environment, etc., all of which are carefully recorded. These patients are also examined with reference to the existence of physical disorders or defects of a medical or surgical nature, the removal of which might effect an arrest of the mental retardation which is often mistaken by public school teachers for psychopathic mental defect. Subsequently they are seen at their homes, if they have any, by intelligent visiting nurses, and if it is found that that they cannot be properly cared for at home, as is frequently the case, they are sent to The Randall's Island Hospital for Atypical Children or to state institutions for that class.



Owing to the crowded state of the public institutions for the various classes of mental defectives in the state of New York, all of which have a constantly lengthening waiting list of applicants, there remain thousands of uncounted and unrecognized mental defectives who ought to be segregated in proper colonies, but who, under existing conditions, remain at large, receiving no training whatever, and what is still worse, availing themselves of every opportunity to propagate their kind.

It is clearly the duty of the state to protect itself from these growing evils by establishing colonies where those who are known to be mentally defective or subnormal can be segregated, and steps taken for the adoption of measures to prevent them from propagating their species. This duty can best be fulfilled by establishing such colonies under competent management which shall be entirely free from partisan influence and control.

These colonies should be located in rural districts where lands are abundant and cheap, and where their inmates may be trained in agricultural and other industrial occupations, and where they will not have opportunity to commit crimes or to reproduce their kind.

It is not to be expected that such colonies will ever become self-sustaining, although the products of their industries should materially lessen the cost of their maintenance. The cost to taxpayers, however, for the support of these institutions, would be a mere bagatelle in comparison with the enormous saving through effectual arrest of the propagation of the mentally defective classes.

As bearing upon the question of cost, I quote the following illuminating paragraph from the report to the New York State Charities Aid Association, already referred to:

That the segregation of defectives costs money is remembered; that it saves money is often forgotten. The initial cost of segregation would be great but the saving effected by correcting our present lax methods would be greater. As tax bills are not itemized, the ordinary citizen does not realize that he is at present paying for the unrestrained presence of the feeble-minded. An added tax for their segregation would be an apparent rather than a real increase, for through segregation of defectives, the number of criminals, the number of prisoners, the cost of trials, the demand upon public and private charity would be materially decreased; and as control of hereditary conditions resulted in decrease in the number of defectives, and training rendered many of them self-supporting, the expenditure necessary

for their maintenance would from year to year grow less. The feeble-minded at large are as dangerous, if not more dangerous, than persons suffering from contagious disease. No consideration of cost, of parental affection and responsibility, or of personal liberty should be allowed to weigh against public safety.

Respecting the question of prophylaxis in connection with the problem of mental defectives, it may be said that there is no other form of disease or defect, mental or physical, with the possible exception of smallpox, that could be so readily and so surely stamped out, given the proper legal machinery for its control. This should embrace, first, the segregation of every dependent, feeble-minded person, and, second, the sterilization by vasectomy on the male and oophorectomy on the female, of every such person.

That a radical cure of the evils incident to the dependent mentally defective classes would be effected if every feeble-minded person, every incurably insane or epileptic person, every imbecile, every habitual criminal, every manifestly weak-minded person, and every confirmed inebriate were sterilized, is a self-evident proposition. By this means we could practically, if not absolutely, arrest, in a decade or two, the reproduction of mentally defective persons, as surely as we could stamp out smallpox absolutely if every person in the world could be successfully vaccinated.

The real object of dealing with mental defectives, as with crime, is the protection of society. This being true, there is no valid reason why society should not still further protect itself by making statutory provision for the prevention of child-bearing among the so-called unfit, that is, the mental defective and the hereditary criminal, and I believe that the time is not far distant when the necessity for such provision will be recognized and the means for its fulfilment adopted in every civilized community. Surely we should not hesitate to apply the same principles to the criminal and degenerate classes that we apply to vicious or otherwise unfit domestic animals, if by so doing it would, as we may reasonably suppose, result in materially lessening the vast amount of misery, crime and distress which are now so prevalent in every community, not to speak of the economic aspect of the question.

As regards the unsexing of criminals, feeble-minded, and other so-called unfit individuals by surgical procedure, I am aware that strenuous objections to it have been raised in certain quarters. But these objections, I believe, are based largely on unreasoning sentiment, prudery or ignorance of the nature and effects of the operation in question.

The most of my hearers are doubtless familiar with the reports of Dr. H. C. Sharpe, of the Jeffersonville Indiana State Reformatory, respecting the simple operation of vasectomy which he performed under legal sanction upon more than 500 of the inmates of that institution, without anæsthesia and without any untoward results. On the contrary, the operation was followed, in substantially every case, by improvement in the general character and disposition of the individual, a lessening of nervous fatigue and irritability, and a decided increase in energy and sense of well-being. There was no atrophy of the genital organs nor impairment of sexual desire or of its gratification. These facts would seem to warrant the sanction of the operation as applied to mental defectives, chronic epileptics, confirmed criminals, habitual drunkards, etc., provided it be done under proper legal restrictions.

Realizing that the subject of mental defectives is a trite one to most of my fellow members, I have aimed to discuss it here only in the most elementary way, and largely for the purpose of suggesting that it is a matter which may properly and profitably engage the attention of the association, and to that end I have prepared the following preambles and resolutions which, while disclaiming any pride of authorship or originality in them, I shall offer to the association at an opportune time during its present meeting for consideration and for such action thereon as it may deem best:

**WHEREAS**, It is universally conceded that feeble-minded persons are, by reason of their mental deficiency, unable to conform to the laws that govern normal people, and hold themselves to acceptable standards of work and morality, and

**WHEREAS**, The inability of the feeble-minded to assume the responsibility for their own conduct renders them a burden to their families and a menace to the public, upon whom the burden of their maintenance, of their criminality, of their weakness and of their immorality ultimately falls, and

**WHEREAS**, Many feeble-minded persons are susceptible to training and becoming self-supporting, useful individuals, and

**WHEREAS**, It is the consensus of scientific opinion that by the application of vigorous measures the conditions producing feeble-mindedness may be, in great measure, controlled and the number of such persons reduced to those arising from exogenous or accidental causes, therefore be it

*Resolved*, That it is the duty of every community properly to care and provide for all classes of idiots, feeble-minded persons and mental defectives, and that, in order to secure their greatest good and highest welfare, it is indispensable that institutions for their exclusive care and treatment, under competent medical supervision, and free from partisan influences, should be provided, and that it is improper except from extreme necessity as a temporary arrangement, to confine feeble-minded or mentally defective persons in jails, penitentiaries, hospitals for the insane, almshouses or other institutions not especially provided for their proper care and education.

*Resolved*, That every state and country represented by this association should enact adequate laws for the proper segregation of feeble-minded persons, and the prevention of propagation of their kind, by separating the sexes and precluding ill-advised contact with the world at large.

*Resolved*, That these same states and countries should enact a marriage law which will require a clean bill of health and evidence of normal mind before a marriage license is issued.

In conclusion I congratulate the association upon the large attendance of representative members at this meeting; upon the excellence of the program offered; upon the prosperous and flourishing state of our affairs generally, and especially upon the number and quality of our present membership, which according to the secretary's records now numbers more than 800.

I also congratulate you upon the spirit of fraternity which now pervades our ranks, and the comparative freedom from so-called "medical politics" and the cliques so often found in large organizations like ours, which meet but once a year, by reason of which there is an ever present tendency of its government to drift into the hands of a few, who, guided by precedent, often block the way of progress.

And finally, I beg to thank the association for the high honor you have conferred upon me in choosing me to preside over your deliberations for the current year; and also for the uniform courtesy and indulgence extended to me by my associate officers, by the council, and especially by our accomplished and zealous committee of arrangements.



## ANNUAL ADDRESS.

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### THE RELATIONS OF INTERNAL MEDICINE TO PSYCHIATRY.

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The subject which I have chosen for my remarks is the relation of internal medicine to psychiatry. Workers in internal medicine who are not psychiatrists will, as a group, look at such a topic from a view-point somewhat different from that of a group of psychiatric workers. Moreover, no two members of either group can be expected to hold identical views, owing to inequalities in innate tendencies and in opportunities for acquiring knowledge. You will not expect me, therefore, with the prejudices of my group and with the bias peculiar to myself, to give expression to opinions wholly satisfactory either to psychiatrists or to other internists. As fellow workers in allied fields of natural science, however, your way of looking and mine are sufficiently alike to permit, I hope, of a similarity of view consistent with sympathy and with conditional approval. It is desirable that from time to time various internists and various psychiatrists shall give expression to their ideas regarding the mutual relations of their respective subjects, for the fruits of such discussion should grow in value with the number sharing in it.

Satisfactorily to deal with my topic, the province of each of the two subjects should be defined; but as with every two sciences which overlap or border on one another, there is likely to be some doubt as to the exact territory of each. As generally understood, *internal medicine* has to deal with the science and art concerned with the restoration and preservation of health by means other than those employed by the surgeon and the obstetrician, while *psychiatry* has to deal with the study and treatment of diseases of the "soul" or "mind," the word "psychiatry" being derived from the Greek *psukhē*, meaning breath, life, soul, and *iatros*, meaning

physician. Thus, out of the larger subject, medicine, dealing with all disease other than that dealt with by surgery and by obstetrics, and including diseases affecting both what has been called the mind (*psukhē*) and what has been called the body (*sōma*), there has developed a special branch known as psychiatry, in which, according to general assumption, special attention is paid to the diseases which affect particularly the mind.

The actual establishment of psychiatry as a subdivision of internal medicine is of comparatively recent development, scarcely more than a hundred years old. In the medicine of antiquity, it is true, disturbances of the "soul" were thought to be associated with bodily disturbances, especially with fever and with changes in the humors of the body, but this medical view of "mental disease" did not obtain during the middle ages. "Mental disturbances" for the scholars and the priests of that time were not looked upon as evidences of disease but rather as due to demoniacal possession or divine punishment, occasionally to divine ecstasy or rapture. Medical men up to a century ago busied themselves but little with the study and treatment of those who were grossly disturbed "mentally." The treatment these unfortunates received varied with the disturbance. Some of them were lucky enough to be revered and worshipped as saints, but more of them had the misfortune to be regarded as sinners whose only hope lay in a priest who could exorcise evil spirits; all too often, as witches or wizards, practitioners of sorcery, they were made to feel the tortures of the rack or to suffer at the stake.<sup>1</sup> The interest of medical men had become reawakened in mental disease a long time before it became generally recognized that mental disturbances are best studied and treated by physicians, and it was only after the insane began to be treated in a humane manner in hospitals under the care of physicians that the scientific study of "mental disease" could be begun.<sup>2</sup>

Pinel and Esquirol in France; Reil, Nasse and Jacobi in Germany; Gardner Hill, Tuke and Connelly in Great Britain were the pioneers in ameliorating the conditions by providing medical

<sup>1</sup> Kraepelin, E.: *Psychiatrie*. V. Aufl., Leipz., 1896.

<sup>2</sup> Cf. Ziehen (T.): *Die Entwicklungsstadien der Psychiatrie*. Berl. klin. Wchnschr., 1904, XLI, 777-780.

treatment.\* In America asylums for the insane began to be established in the first quarter of the last century; the propagandism of Miss Dorothea Dix, in the middle of the century, led to great reforms in care, and with the opening of the Utica State Hospital in 1843 began "the era of awakening."<sup>4</sup> A demand for psychiatric clinics, for the scientific study of "mental diseases," was made by Griesinger in 1868, since when such clinics have been established in Germany in nearly all the university centers. We have begun to follow Germany's example in America; a psychiatric clinic has existed for several years in Ann Arbor; Boston has a psychopathic hospital<sup>5</sup> which serves a similar purpose, and now Baltimore has the Phipps Psychiatric Clinic. During the past twenty-five years psychiatry, in spite of the obstacles in its way, has developed with surprising rapidity, attaining to general recognition as an important medical specialty. The study of patients by clinical methods has led to the recognition of certain types of abnormal behavior, disorders with characteristic symptoms, course and termination. Psychiatrists, calling to their aid the methods, and utilizing the results, of certain of the more fundamental sciences (anatomy, physiology and embryology of the nervous system, normal psychology, pathological anatomy, experimental pathology, pharmacology, general medicine), have been gradually accumulating data for a foundation upon which a true science of psychiatry may later be built, a science which will reveal the nature and causes of what are now called "mental disorders" and which will permit man to cure or to prevent them.

When we inquire why it is that psychiatry has been marked off as a special province of internal medicine, to be cultivated for its own sake by a selected group of men known as psychiatrists, rather than by the general practitioners of internal medicine who deal with diseases of the respiratory, circulatory, digestive, urogenital, nervous and other systems of the body, we find the

\*Garrison (F. H.): An introduction to the history of medicine. Phila. and Lond., 1913; also, Meyer (A.): A few trends in modern psychiatry. Psychol. Bull., 1904, I, 217-240.

<sup>4</sup>Hurd (H. M.): Three-Quarters of a Century of Institutional Care of the Insane in the United States. Am. J. Insan., Jan., 1913.

<sup>5</sup>Cf. Southard (E. E.): Contributions from the psychopathic hospital, Boston, Massachusetts: Introductory note. Bost. M. and S. J., 1913, CLXIX, 109-116.



reasons (1) partly in the historical development above referred to, (2) partly in the fact that, for obvious reasons, the markedly disturbed patients with whom psychiatrists first dealt could not be cared for properly except under conditions differing somewhat from those which obtain in people's homes and in the ordinary wards of hospitals, and (3) partly in the recognition that abnormal mental states and the pathological behavior which accompanies them require for their investigation a training and an experience both in normal psychology and in psycho-pathology which have, hitherto, not been available to the ordinary graduates of medical schools.

It was, then, chiefly an urgent practical need, that of caring for patients whose extraordinary behavior was such as to preclude medical attention at home and in ordinary hospitals, which led to the development of psychiatry as a special branch of medicine. It is well that this should be emphasized, for as knowledge of psychiatry and of medicine increases, it becomes ever clearer that there is no fundamental difference between the pathological states studied by the psychiatrist and those studied by the general internist. The patients who ultimately fall into the hands of the psychiatrists are usually observed in the earlier periods of their illness for a longer or shorter time by internists, and many patients who remain in the general internist's care throughout the whole of their illness exhibit behavior which would be recognized at once by those skilled in psychiatry as the accompaniment of abnormal mental states.

Some seem to believe that the domain of abnormal "mental states" is identical with that of psychiatry, belonging exclusively to it, while the domain of abnormal "bodily states" is identical with that of internal medicine, belonging exclusively, in turn, to it. Without entering further at present upon what is meant by "mental states" and "bodily states" respectively, it is obvious that to define the provinces of internal medicine and psychiatry in the way mentioned will be satisfactory neither to the psychiatrist nor to the general internist. For a large part of the work of psychiatrists to-day consists in the study of the "bodily states" of their patients *ante mortem* and *post mortem*, and no small part of the work of internists consists in securing from their

patients reports of modifications of their "mental states," known ordinarily as the "symptoms" of which the patients complain.

In the study of every patient, an internist begins with listening to a "complaint." If a patient complain of a pain in the abdomen, of a cough, of a feeling of palpitation, of shortness of breath, of diarrhoea, of dimness of vision, of sleeplessness, of disinclination for exertion, of loss of appetite, of numbness in his left foot, in each instance he reports a modification of his "consciousness" which has led him to assume that his body is diseased, perhaps, in the part of it which feels abnormal to him. This assumption of the patient may or may not be correct; the internist often finds that the patient's "ideas" of the nature and localization of his "bodily disturbance" are erroneous. The physician uses, however, the psychic (anamnesic) clues as guides to his search for pathological-physiological processes; he hunts for physical, chemical, or biological changes, first in the parts to which the patient has referred him, and also elsewhere in the patient's body; very often he gives but little more thought to the "mind" of the patient who has reported one or several modifications of his consciousness. Now there would seem to be easy transitions from these slighter modifications of "consciousness" which we call the "symptoms" of ordinary "somatic" disease, to the outspoken and complex "mental" syndromes with flagrant maladjustment to surroundings with which the psychiatrist has ordinarily to deal. It is the internist's experience with the pain of gall-stone colic, with the delirium of typhoid fever, with the mental confusion of uræmic intoxications, with the hallucinations which accompany enforced abstinence after alcoholic excess, with the depression which accompanies mucous colitis, with the optimism of the consumptive, with the aphasic, apraxic and agnostic phenomena in cerebral atherosclerosis, with the post-paroxysmal homicidal act of a man who has epilepsy, with the delusions of grandeur in general paresis, with the moral and intellectual defects often seen after disease of the brain in infancy, with the dulness, slow-wittedness and drowsiness of myxoedema, and with the anxiety, apprehension, fear, restlessness and irritability characteristic of exophthalmic goitre, which makes him think of the importance of studying "somatic" alterations when the "mind" or "psyche" is disturbed, and of observing the "behavior" of the patient and

of inquiring as to changes in his "mental" states when the "body" or "soma" is obviously diseased.

We might further attempt to express the relation which obtains between internal medicine and psychiatry by applying in pathological domains a modern conception of the relation of physiology to psychology,\* and say that internal medicine (exclusive of psychiatry) investigates the processes (under diseased conditions) of the parts, or organs, of which any organism is composed, while psychiatry investigates the activities (in abnormal states) of the organism as a whole, that is, those activities in which it operates as a whole or unit. But from what has been said of the work now actually carried on by psychiatrists on one side and by general internists on the other, it is plain that these definitions are not entirely satisfactory, though they approach the goal and are doubtless akin to the considerations in which psychiatry is defined as "the science which deals with disorders of adaptation or adjustment of the person to the 'situations' in which he finds himself." If we modify this last definition of psychiatry so as to include only the cases in which there is *conspicuously* abnormal behavior of the person as a whole, we shall come closer to the actual work of the psychiatry of our time. It is not worth while, perhaps, to strive too hard for precision. Even if we could satisfactorily delimit the provinces under discussion to-day, the boundaries would have to be changed a little later on. We must, therefore, forego any attempt at final and rigid mapping, be content with outlining the areas provisionally, and be prepared to change the outlines as the sciences develop, as their methods of study change, or as the needs of practice dictate. Our difficulties would only be increased if we tried sharply to mark out the field of neurology; this doubtless explains why, in some universities, neurology has an independent place, in others is combined with psychiatry, and in still others is kept in the department of internal medicine.

It would certainly not be wise to limit the psychiatrist's studies to what are ordinarily known as the "insanities" or "lunacies," to the patients whose "unsoundness of mind" is, for example, symptomatologically designated as mania, melancholia, dementia,

\* McDougall (W.): Psychology, N. Y. (Home Univ. Library), 1913.

hallucinatory confusion, paranoia, hebephrenia or catatonia, syndromes one or more of which may be met with in the several pathological states known as the manic-depressive psychoses, the idiocies and imbecilities, the toxic and infectious processes, dementia paralytica, the senile dementias, or the psychoses of adolescence (*dementia præcox*). While the practical side of his work may compel him to give the major part of his time to the study and care of such patients, it is mandatory for the advance of his science that he shall have opportunity to study also (1) some of the patients ordinarily described as "nervous" or "psychoneurotic," rather than "insane," I mean, for instance, the "neurasthenic," the "hysterical," the "psychasthenic," or the "hypochondriacal," and (2) some of the patients, presenting the phenomena known as aphasia, agnosia, and apraxia, due to local lesions in the brain. There is no dearth of such material; every community supplies it in amounts adequate to provide for the investigative needs of the psychiatrists, as well as for those of the general internists and the neurologists. It will be all the better if the psychiatrist can add still further to his objects of study and include a certain number of those individuals who are thought not to be actually diseased but only to be psychologically "unusual," for instance, (1) geniuses, (2) those who have undergone or are reported to have undergone peculiar experiences (hypnotic, mystical, psychotherapeutic, telepathic, etc.), and (3) those who manifest so-called anti-social tendencies (*e. g.*, vagrants, prostitutes, criminals).

Indeed, to build up a general psychopathology, whether it have an associational basis, as in the attempt of Ziehen, or a clinical pathological basis, as in the effort of Wernicke,<sup>1</sup> or be more eclectic, as exemplified by the recent works of Lugaro<sup>2</sup> and of Jaspers,<sup>3</sup> a large and varied clinical and pathological experience is desirable. The general psycho-pathologist can, however, in his constructions, make good use of the results of intensive studies made in more circumscribed fields. He must know how to value in the first place researches dealing with the subjective phenomena

<sup>1</sup> Wernicke (C.): *Grundriss der Psychiatrie*. 2 Aufl., Leipz., 1906.

<sup>2</sup> Lugaro (E.): *Modern problems in psychiatry*, Eng. Transl. by D. Orr and R. G. Rows, Manchester, 1909.

<sup>3</sup> Jaspers (K.): *Allgemeine Psychopathologie*, Berlin, 1913.

of mental disease (phenomenology), whether these are reported by patients as referring to external objects, to persons other than themselves, or to their own bodies, and including not only cognitive states but also feelings and emotions (affective states), and consciousness of effort or striving (conative states). He must understand also how to estimate the objective symptoms of "mental disease," the objectively demonstrable disturbances of perception, comprehension, orientation, association, memory, motility, speech, the bodily expressions of mental states (physiognomy, writing, work, behavior). He will pay attention especially to reports of investigations undertaken from the experimental side." Besides utilizing these studies bearing upon the subjective and objective elements, he has further to determine the worth of researches which deal with the connections which exist among the subjective phenomena, that is, with the way in which systems and dispositions develop in the mind in disease and with the manifestations of the abnormal "structure of the mind" in the so-called "pathological reactions,"<sup>11</sup> in "pathological suggestibility," in "pathological after-effects of earlier experiences," or in the splitting off of smaller or larger systems and dispositions from the mind as a whole ("dissociation of personality"). In this domain come also the observations upon the attitude of the patient toward his own disease, whether it be one of total "perplexity," or one in which he more or less critically observes his own mental state and decides that it is either normal or abnormal (absence or presence of so-called "disease-insight").

The worth of investigations of the connections existing among the elements on the objective side have also to be weighed and judged by the all-round psychopathologist. These connections appeal especially to the worker who has been trained in biology, physics and chemistry, for it is in them that he believes that causal explanations are to be sought. Regarding the structure and functions of a living organism as the resultant of the interactions between factors of heredity and factors of environment, he will enter upon the Herculean task of analyzing, in an individual case,

<sup>11</sup> Cf. Hoch (A.): A review of psychological and physiological experiments done in connection with the study of mental diseases. *Psychol. Bull.*, 1904, I, 241-257.

<sup>12</sup> Meyer (A.): The problems of mental reaction-types, mental causes, and diseases. *Psychol. Bull.*, 1908, V, 245-261.

the reciprocal influences of exogenous forces and the innate tendencies derived from the patient's progenitors. Here all the methods of internal medicine—physical, chemical and biological—have to be employed. It is only on a basis of studies such as I have referred to that we can hope in the future for a satisfactory general psychopathology, one adequate for application to the clinical syndromes which we meet every day either as psychiatrists or as general internists. And as our knowledge of general psychopathology grows, our classification of the psychoses and psychoneuroses will gradually change. Clinical syndromes will be multiplied or reduced as further knowledge permits of greater discrimination on the one hand or of better syntheses on the other. Psychological classifications will arise on the subjective side, while on the objective side pathological-histological, chemical, physical, and biological classifications will be established; and, most important of all, we shall ultimately arrive at the groupings which are so important for prevention, namely the etiological.

I have spoken of "consciousness"<sup>22</sup> as though there were no doubt that it occurs. But we live in iconoclastic times, and there are people who deny the existence of "consciousness" as they do that of "ideas" and the possibility of "introspection."<sup>23</sup> Now medical men, as a rule, have had but little training in psychology or in psychophysics. They have had an education in natural science (physics, chemistry and biology), and in the laboratory and clinical branches of medical science. They take it for granted that they are conscious organisms themselves, that other human beings and perhaps animals are conscious, and that consciousness if experienced by lower animals, by plants, or by inanimate objects in the external world must be very unlike their own. They are familiar with different grades of consciousness in themselves from the full awareness of alert states through the lessened awareness of dreams to the "unconsciousness" of deep sleep or of ether-anæsthesia. This consciousness occurs in the same living body which they study in other ways;<sup>24</sup> they do not think of it

<sup>22</sup> Cf. Marshall (H. R.): *Consciousness*. N. Y., 1909, 1-685.

<sup>23</sup> See the interesting discussion of this subject by Lovejoy (A. O.), *On the existence of ideas*. Johns Hopkins Univ. Circ., n. s., 1914, 178-235.

<sup>24</sup> Kraus (F.): *Die Abhängigkeitsbeziehungen zwischen Seele und Körper in Fragen der inneren Medizin*. *Ergebn. d. inn. Med. n. Kinderheilk.*, Berl., 1908, I, 1-46.

as anything separable from the living body; it disappears sometimes while the body is alive; they think that human and animal consciousness ceases to exist, as such, at death and often at a considerable period before death when this is preceded by coma.<sup>36</sup> Familiar with the conceptions of development and of adaptation, they think of the gradual evolution of consciousness in each human individual as well as in the animal series; they think of it as having its origin in lower forms of mentality, for they do not think of attributing to the amœba any awareness comparable to their own; since, however, they see a graded series of living organisms extending all the way from the protozoa to man, it is not hard for them to think of similar gradations in the "mental" or "psychic" all the way up to the "mind" of man from the "protoesthesia" of the amœba. Indeed some medical men, as did Paracelsus and Jerome Cardan centuries ago, can go further and conceive of a "psychic" side to the inorganic world (as in the doctrines of hylozoism and panpsychism).<sup>37</sup> On account of their training in biology and in evolution, physicians think of the mind as developing parallel with the increasing complexity of the mechanisms of regulation and association, that is, with the advancing intricacy of the nervous system, in organisms struggling for their own existence and that of their species. They find it natural, therefore, to look upon "consciousness" and upon "infraconscious mind" as in some way indissolubly connected, in human beings and in the higher animals, with the physiological processes going on in the nervous system and the sense organs. They are sympathetic with the doctrine of various levels of reflexes in the nervous system; they recognize that the activities of the lower levels may not be associated with consciousness but think it possible, with Knight Dunlap,<sup>38</sup> that no consciousness occurs without complete arc-reflexes involving the higher levels. In examining the writings of workers in psychology, physicians sometimes find it difficult to understand all that is said in the dis-

<sup>36</sup> I am, of course, not referring here, in any sense, to the ultimate problem of the "immortality of the soul."

<sup>37</sup> See articles on these subjects in Eisler (R.), *Wörterbuch der philosophischen Begriffe*. 2 Aufl., Berlin, 1904.

<sup>38</sup> Dunlap (K.): *A system of psychology*, N. Y., 1912; also, *Images and ideas*. J. H. Univ. Circ., 1914, 161-177.

cussions regarding (1) the difference between "consciousness" and its "content" and (2) the subject-object relationship! Medical men are, however, conscious of "knowing" and "feeling" and "striving" themselves, and they note that these processes occur in cycles which tend naturally to end in feelings of "satisfaction." Observing other people's behavior, they conclude that these others also "know" and "feel" and "strive." They realize that they can be conscious not only of content which is "present" (intuition) but also of content "not present" (imagination). They can recall the past (recollection); learning, too, that what they are conscious of at any given moment has its "meaning" because of earlier experiences, they speak of "memory" and try to explain it by conceiving of some structural modification of the nervous system that endures, labelling the record a "mental disposition" or an "engram." They see that, as minds develop, these "mental dispositions" become exceedingly numerous and are systematically arranged in smaller groups, larger groups and finally in one vast system; on the cognitive side, the total accumulation constitutes, abstractly considered, the "knowledge" possessed by the mind, while on the affective and conative side the total accumulation, abstractly considered constitutes the "character" of the individual.<sup>13</sup>

Especially interesting to physicians and psychiatrists are the systems of mental dispositions which pertain to the body of the individual in contrast with those which pertain to the "world" external to that body. In all conscious states the background is formed by somatopsychic constituents, that is by elements referable to the body itself, including the kinæsthetic and visceral sensations, the innervation-feelings, the appetites, and the aversions, and the various so-called affective or emotional states. Our bodies are always "with us"; they are being continually experienced in our conscious states; the "content" corresponding to these bodies is relatively constant as compared with the infinite variation of the "content" corresponding to the external world. No wonder that this "content" pertaining to the body seems to be peculiarly our own; it is "private" content in contrast with that content which (in a sense, but only in a sense) can be publicly shared. No wonder that we speak therefore of the "self," and

<sup>13</sup> Cf. McDougall (W.): *loc. cit.*



define introspection in the narrower sense as "observation of the self," remembering, however, that in the wider sense introspection may refer to examination of the total content. Nor is it surprising that many find it desirable to designate the "observer" as the "I" or "Ego," the "subjective correlator of experience" in contrast with "what is observed," *i. e.*, with the content ("self" and "not self").<sup>19</sup> In this connection it is well to keep in mind the fact that the body is an agglomerate of organs and that the conditions dealt with by the physician often involve gross alterations in the elements of this organ-agglomerate. It is surely not surprising, that somatic disease is often accompanied by alterations in the "self" which have a peculiar tendency to persist and to be characterized by negative feeling tones.

Medical men are not likely to give up the study of consciousness or to refuse to use the reports given by patients of their "subjective" experiences.<sup>20</sup> Such a policy would seem to them absurd. But wedded as they are to the method of investigation of the natural sciences, they welcome objective methods of study whenever these are feasible. This predilection, together with the naturalist's tendency to resort when possible to comparative<sup>21</sup> and genetic methods, accounts for the physicians' sympathy with the "behavior psychology" of our time. The study of animal behavior by men like Loeb<sup>22</sup> and Jennings<sup>23</sup> has given us entirely new conceptions of instinct and of intelligence, of the nature of so-called "purposive activities," of the bases of human nature, and of the evolution of mind in the animal series up to man. Recently a number of psychologists—the so-called behaviorists—have tried to eliminate introspective methods in psychology and to describe the whole mental life of man in terms of "expression" or "behavior." Starting with the conception of the neuropsychic reflexes (inherited nervous mechanisms modified by past indi-

<sup>19</sup> Cf. Dunlap (K.): *loc. cit.*

<sup>20</sup> Cf. Angell (J. R.): *Psychol. Rev.*, 1913, XX, 255-270.

<sup>21</sup> Cf. Herrick (C. J.): Some reflections on the origin and significance of the cerebral cortex. *J. Animal Behavior*, 1913, III, 236.

<sup>22</sup> Loeb (J.): *Comparative physiology of the brain and comparative psychology*, N. Y., 1900, 1-309; also, *The mechanistic conception of life*, Chicago, 1912, 1-232.

<sup>23</sup> Jennings (H.): *Behavior of the lower organisms*. N. Y., 1906, Macmillan Co. 380 p. 8°.

vidual experience) they study the responses to external stimuli (reflex responses) and to internal stimuli (automatic responses) as manifest in movements, vasomotor activity, or gland secretion. In this country, Watson\* and Meyer\*\* are well-known advocates of behavioristic studies. Recently the Russian neurologist, v. Bechterew,\*\* in a book entitled "Objective Psychology" has made a consistent and fairly successful attempt to view human psychology from this standpoint. The "conditional reflexes" (involving associative memory) can be studied in several ways. Pawlow taught us the use of the "salivary method" in the dog; Weber, in Kraus's clinic in Berlin, worked with the vasomotor method; Bechterew uses a special method, that of motor association reflexes. In studying the more specialized forms of complex responses, Bechterew describes the "concentration-reflex" (the behavior analogue of attention), the "symbolic reflex" (analogue of language), and the "personal reflex." As a program of study likely to be fruitful, behavior psychology would seem to be highly commendable; but in its more dogmatic statements, its denial of the value of introspective methods, its total repudiation of "images," medical men are not likely wholly to concur.

Internal medicine and psychiatry, confronted as they both are by the problems of the physical and the mental,\*\* must obviously be directly and deeply concerned with the nature and origin of knowledge (epistemology) and with the nature of reality (ontology). Starting out, as every one must, with naive notions regarding the world of things we know and as to how we know it, physicians come gradually and more or less unconsciously to the adoption of certain epistemological and ontological theories. Though there is no unanimity in opinion among medical men, their special training and experience make them much more sympathetic with some tendencies than with others. First of all,

\* Watson (J. B.): Psychology as the behaviorist views it. *Psychol. Rev.*, 1913, XX, 158-177; also, Image and affection in behavior. *J. Phil., Psychol.*, etc., 1913, X, 421-428.

\*\* Meyer (M.): Fundamental laws of human behavior. 1911.

\*\* v. Bechterew (W.): *Objective Psychologie*. Leipz. and Berl., 1913, 1-468. See review by H. C. Warren in *Science*, N. Y., 1914, n. s., XXXIX, 426-428.

\*\* Cf. Warren (H. C.): The mental and the physical. *Psychol. Rev.*, 1914, XXI, 79-100.

they desire to stick close to experience, lauding the empirical and deprecating the speculative; but, despite this tendency, which on the whole is a good one, they often refuse to theorize when it would be helpful, and they are ever unconsciously transcending experience. In the second place, brought up in the school of the natural sciences, saturated with mechanistic explanations, the medical mind has a structure which predisposes it, at least at the beginning of its critical and philosophic interests, to what metaphysicians designate as materialism and realism, rather than to what they call idealism.

On talking with a number of the more reflective among the medical men I know, and on reading opinions in the literature, it would seem that the critical medical mind of to-day is appealed to especially by the natural-science theory of knowledge\* (W. K. Clifford, Karl Pearson, E. Mach, W. Ostwald, H. Poincaré), but as regards theories of being it is less uniformly responsive. Many physicians lean toward a phenomenal idealism which is not far removed from realism (*e. g.*, Immanent Philosophy of W. Schuppe; Empirio-criticism of Avenarius; Energetics of W. Ostwald and Lasswitz); others adopt a personal idealism (*e. g.*, Humanism of Schiller; Pragmatism of W. James, J. Dewey, and H. Bergson); still others are captivated by some form of realism (*e. g.*, Intuitive Realism of the Scotch School; Synthetic Philosophy of H. Spencer; the New Realism of Woodbridge, Montague, Holt, and S. Alexander). Occasionally a physician adopts an out and out idealism (*e. g.*, Neo-Hegelian Rationalism or Absolutism of B. Bosanquet; of J. Royce), and, here and there, one, reflecting upon the issues between the realists and the idealists, accepts a kind of synthesis of pragmatism and rationalism, trying to avoid the extremes of each (*e. g.*, Theism of J. Ward; of E. H. Griffin<sup>†</sup>). A large number of medical men decline to let their *pia mater* be stretched by metaphysical considerations at all; many assume either an agnostic attitude, or at least one of suspended judgment.<sup>‡</sup>

\* For a good epitome of such views, see Kleinpeter (H.): *Die Erkenntnistheorie der Naturforschung der Gegenwart*. Leipz, 1905, 1-156.

† Cf. Griffin (E. H.): Some present-day problems of philosophy. Johns Hopkins Univ. Circ., 1914, 140-160.

‡ For welcome summaries of current philosophical views, see (1) Perry: *Present philosophical tendencies . . .*, and, Caldwell (W.): *Pragmatism and idealism*. Lond., 1913, 1-265.

Psychiatry, then, as I see it, is a large and very important chapter of Inner Medicine. Every internist should have at least some training in psychiatry, and every psychiatrist should be well-versed in the fundamental facts and methods of study of general medicine. Psychology—both introspective and behavioristic—is just as important as a preliminary study for the prospective medical student as physics, chemistry or biology.

Considering the disadvantages under which psychiatry has worked in the past, the science is certainly to be congratulated upon the fine minds it has attracted and upon the results it has accomplished under difficulties. Full of fascinating problems, psychiatry is in the near future, I venture to aver, likely to prove a formidable rival of all the other medical specialties for the affections of the better young men now entering upon medical careers. We have only to think of the very important social relations of psychiatry to understand that this must be so.

Contemporary psychiatry shows no timidity in the tasks it is assigning itself.<sup>24</sup> On the contrary, it manifests an ardor and a courage typical of youth. It does not limit itself to the mere study of the insane or the manifestations of insanity. It desires to investigate the cerebral events underlying the abnormal mental states. It is not satisfied with normal psychology or with brain-anatomy and brain-physiology as they exist to-day, and insists, that at least some psychiatrists make contributions in these fields. It studies the pathological anatomy and histology of the brains of the mentally diseased, but it does not stop at the local changes in the brain; it studies also the changes in other organs of the body, seeking abnormal processes there which can account for abnormal brain processes. Then it tries to discover in a faulty heredity, or in environmental influences, explanations of these abnormal processes. Psychiatry studies also the evolution of mind in the individual and in the animal series, and tries to relate this evolution to studies in comparative anatomy and physiology. It does not try to escape from the borderlands of philosophy and metaphysics, but actually ventures into these neighboring territories, taking part, as we have seen, in attempts to construct a theory of knowledge and theories as to the nature of reality.

<sup>24</sup> Cf. Lugaro (E.): *loc. cit.*

Psychiatry has, surely, no narrow conception of its plan of work.<sup>22</sup> The technical knowledge demanded for a successful attack upon all its problems is enormous. The methods of a whole series of subsidiary sciences must be drawn upon. No single investigator, of course, can hope to be active in all parts of this large and varied field of inquiry. Not even the collective activities of the members of a single psychiatric clinic can cultivate more than a small portion of the field. The work is cut out for the aggregate of the world's psychiatrists for at least many generations ahead.

The general internist can, perhaps, do most to help psychiatry progress by studying carefully the bodily "equivalents" of psychic phenomena, the contractions of striped and unstriped muscles, the activities of the glands of external and internal secretion, the respiratory and vasomotor changes, and the modifications of coenæsthesia. Present-day studies of the abnormalities of the functions of the autonomic nervous system<sup>23</sup> on the one hand, and of the diseases of the ductless glands (endocrinopathies)<sup>24</sup> on the other, and their relations to the mind, are instances which illustrate the possible influence of Inner Medicine on a developing Psychiatry. We have far to go, but we are on the way.

<sup>22</sup>Cf. Meyer (A.): A short sketch of the problems of psychiatry. *Am. J. Insan.*, 1897, LIII, 538-549.

<sup>23</sup>Cf. Barker (L. F.) and Sladen (F. J.): The clinical analysis of some disturbances of the autonomic nervous system, etc. *Trans. Asso. Am. Phys.*, 1912, XXVII, 471-502; also, Barker (L. F.), the clinical significance of the autonomic nerves supplying the viscera, and their relations to the glands of internal secretion. *Can. Med. Asso. J.*, Montreal, Aug., 1913.

<sup>24</sup>Biedl (A.): *Innere Sekretion*. II Aufl., Wien, 1913.

## GENERAL PARALYSIS AS A PUBLIC HEALTH PROBLEM.

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The object of this paper is simply to state the problem of general paralysis in the language of preventive medicine. We have to consider a disease so formidable that the mortality rate practically coincides with the morbidity rate. Let us attempt to answer some of the questions which we would ask if we were examining any other important cause of death from a public health view-point: What is the incidence of the disease? Do the mortality reports accurately show its prevalence? If not, in what mortality groups shall we be most likely to find it reported? What is there of practical sanitary interest in the age, sex, race, occupation and environment of the victims of the disease? By what means may it be controlled?

The nation is the field in which an inquiry should be undertaken to answer these questions, but unfortunately there are two great obstacles to such a wide study. One is the fact that little more than 60 per cent of the people in the United States are born and die in what is termed the "registration area"—that portion of the country in which satisfactory records of the causes of deaths are made. The other obstacle is the fact that the status of psychiatry in different parts of this country varies so greatly that the clinical reports of hospitals for the insane cannot be satisfactorily compared. It is necessary, therefore, to choose a narrower field and to sacrifice completeness for accuracy. New York State has an efficient law for the registration of births and deaths, and the insane are treated in hospitals making use of uniform methods of collecting scientific data. Moreover, statistical studies of the work of the hospitals are conducted, under a carefully devised general plan, by a competent medical statistician associated with the central supervising board. If our inquiry is made in New York, therefore, we shall be able to place much more

confidence in its results than if we undertook to make it in a larger territory.

As general paralysis is practically a uniformly fatal disease, we may read the record of its incidence in the mortality rates. We find that in the year ending December 31, 1913, the New York State Department of Health reported 591 deaths from this disease. The fiscal year of the New York State hospitals ends September 30th. In the year ending on this date in 1913, 638 cases of general paralysis died. The discrepancy is due to the fact that a considerable number of deaths in general paralysis are assigned to other causes. Of the 638 deaths in this disease which occurred last year in the New York State hospitals, only 487, or 77 per cent, were assigned to general paralysis. The others were assigned to a variety of other causes. In about one per cent of the paretics who died, the causes given are definitely associated with the lesions of the disease itself. Such causes are cerebral hemorrhage, meningitis and syphilis. There can be no question of the impropriety of ascribing deaths in general paralysis to these causes. It would be as logical to give "peritonitis" as a cause of death in cases of typhoid fever in which perforation occurs or to give "hemorrhage" as a cause of death in pulmonary tuberculosis. About ten per cent of deaths in general paralysis in New York State hospitals were assigned to causes which are really terminal conditions in the disease or accidents dependent upon its existence. Among these may be mentioned decubitus, purulent infections, septicemia, bronchopneumonia and edema of the lungs. There may be some doubt as to whether it is proper to give these as primary causes of death in a disease like general paralysis in which the pathological process is well understood and the relation of the lesions in the brain to the general bodily disintegration is definitely known. We do not give such causes in deaths from cancer and there seems no special reason for doing so in general paralysis. Personally, I think that it is most undesirable to term such conditions primary causes of death. They are distinctly secondary causes and this fact should be indicated in death certificates.

In about six per cent of all deaths in general paralysis in the series under consideration the causes assigned bear little relation to the disease itself. Among such causes may be mentioned

tuberculosis, typhoid fever, cancer, hernia and organic diseases of the heart and of the kidneys.

So in our state hospitals, where very few cases of general paralysis die without a diagnosis of the disease being made, general paralysis is given as the cause in only 77 percent of deaths. If this is true of deaths from this disease in the community at large, 768 deaths must have occurred in the State of New York from recognized general paralysis during the year ending December 31, 1913, instead of 591 as reported. But it is undoubtedly true that a very much larger proportion of deaths in this disease occurring in the community are reported under some complicating physical condition, even though the existence of general paralysis is recognized, than in institutions where the disease itself is so well understood.

It is a strong statement to make, but I believe that general paralysis is practically unrecognized outside of institutions for the insane and that the small excess in the number of deaths in recognized general paralysis reported in the state at large over those reported in institutions for the insane can be accounted for almost wholly by deaths among patients with general paralysis who have been discharged. Few persons, even those engaged in institution work, realize how many cases of general paralysis are discharged from our public institutions and are never readmitted. During 1911, 1912 and 1913, practically one-fifth of the men and one-fourth of the women who were admitted to New York state hospitals with general paralysis were discharged and of this number less than one-half were ever subsequently readmitted. The other half died in their homes, and, as the diagnosis was usually made known by the hospital authorities to the friends and relatives as well as to the family physicians, I believe it is among these persons, almost exclusively, that the deaths from recognized general paralysis in the community are reported.

Thus far, we have made little progress in determining the total death-rate from general paralysis. We must examine other mortality groups for information as to the number of deaths from general paralysis in the community. Under what conditions shall we be most likely to find them reported? Obviously, a large number will be found reported under the names of those diseases which really constitute terminal conditions in general paralysis.



I am afraid that those reported in these groups are so deeply hidden that it is impossible to devise a practical means of inquiry which will disclose them. There must be many cases of general paralysis dying at home, however, in which the mental and nervous symptoms are too prominent to be ignored in death certificates. Some causes reported in New York state, in 1913, which might arouse suspicion that general paralysis is the real disease are "softening of the brain" (150 deaths) and "paralysis without specified cause." (716 deaths). We know the age period in which general paralysis is most frequent and I think it would be entirely feasible to ascertain from the State Health Department the names and residences of persons dying within this age-period from the two causes mentioned, and then to obtain from the physicians who signed the death certificates information as to whether mental symptoms had existed before death and as to the duration of the disease. Such an inquiry would give us valuable clues regarding the frequency of unrecognized general paralysis. Dealing as we are with a disease every case of which must ultimately come to the attention of public health officials through a death certificate, the mortality lists afford the most promising field of study.

Another means by which it might be thought we can estimate the incidence of unrecognized general paralysis is to proceed forward from infection with syphilis instead of backward from the death certificate. Until recently no one knew, even approximately, what proportion of cases of syphilis terminated in general paralysis. Many estimates have been made, most of them upon very slender evidence, but the first extensive study was that made in 1912 by Pilcz and Mattauschek. They examined the records of 4,134 officers of the Austrian army who had contracted syphilis between 1880 and 1890, and they ascertained that about  $4\frac{9}{10}$  per cent had developed general paralysis by 1912. If this proportion exists in other groups of population, and if we had reliable information as to the number of persons with syphilis in the community, it would be possible to predict with some degree of accuracy the number of cases of general paralysis which will occur annually. Unfortunately neither of these assumptions is correct. We know that many conditions of race, personal susceptibility, possibly heredity and other factors have marked influence in determining whether syphilis invades the central nervous

system or not and, if it does, in what form its manifestations will appear. Estimates of the number of cases of syphilis existing in the community vary so enormously that it is apparent that they are mere guesses. Therefore we must abandon this approach to our problem.

A more practical plan is to attempt to discover the number of paretics in groups of dependent people in such institutions as almshouses, work houses and hospitals for the treatment of chronic diseases. Here it is possible to obtain some interesting evidence, although very little careful study has been made of such conditions. Dr. A. J. Rosanoff once examined the necropsy records in a large general hospital and, although I do not know of any formal paper in which he has made his results known, he has told me that he found not a few cases in which the anatomical findings left no doubt that general paralysis existed, although this had not been suspected during life and, in some cases, it was not assigned as the cause of death even after the anatomical findings were made. It is a matter of common knowledge that a number of paretics of a simple dementing type are to be found in our almshouses and workhouses. I have frequently seen them in inspections of almshouses. They are often unrecognized in general hospitals. During four years, 11 cases of general paralysis were admitted to the United States Marine hospital at Boston among about 3,000 sailors admitted for all causes. Only five of these cases, as far as I have been able to learn, have been committed to institutions for the insane. The others died in the hospital or remained under treatment in the general wards, occasioning little more trouble than other chronic cases. It would be a most interesting experiment to have a census of the paretics in the almshouses and county hospitals of New York made by a competent psychiatrist. Such a study would only require about six months and would cost only a few thousand dollars.

It seems strange that so little has been done in this field, but I think it is due principally to the fact that the psychiatric interest in general paralysis has over-shadowed all others. I believe that much can be expected from a general awakening to its public health aspects. Until such investigations as these have been made we must give up the attempt to estimate the number of cases of unrecognized general paralysis and return to the consideration of known cases.

With the information in our possession at the present time, we are able to state that not fewer than 1,000 persons in whom general paralysis is recognized die in New York State every year. Let us compare this with the lives lost from some other important preventable diseases. It means that *one in nine* of the 6,909 men who died between the ages of 40 and 60 in New York last year died from recognized general paralysis and that *one in 30* of the 5,299 women who died in the same age-period died from this disease.

The number of deaths from general paralysis in New York State last year about equalled the number of deaths from typhoid fever. The following table gives the number of deaths due to the ten most important specific infectious diseases. Of course, deaths in measles, typhoid fever and scarlet fever will be found also under the names of some of the complications of these diseases, but it should be remembered that these primary diseases are not invariably fatal as general paralysis is. Many of the patients with measles who died from bronchopneumonia would have recovered but for this complication, while the paretics with bronchopneumonia would have died even if this complication had not arisen. No attempt is being made to compare the *prevalence* of general paralysis with that of other diseases—we are trying only to estimate its share in the *mortality*.

1. Tuberculosis (all forms) .....	16,133
2. Pneumonia .....	9,302
3. Bronchopneumonia .....	7,217
4. Diphtheria and croup .....	1,854
5. Influenza .....	1,381
6. Measles .....	1,071
7. Typhoid fever .....	1,018
<i>General Paralysis—Recognized</i> .....	1,000
8. Scarlet fever .....	837
9. Whooping cough .....	818
10. Syphilis .....	782

It may be interesting to compare the number of deaths from these causes with the number from some other causes which exact a heavy toll of human life. All forms of meningitis were responsible for 842 deaths, cancer of the breast for 809, and the total number of deaths due to injury by vehicles was 478. We hear a great deal about the appalling number of homicides in this

country. There were 459 deaths from this cause in 1913, less than one-half the number due to general paralysis. Locomotor ataxia is of particular interest to us in this connection. There were 238 deaths from this cause. As the duration of this disease is about five times that of general paralysis, there must be about the same number of persons with each of these diseases living at the same time in the community.

Thus we have seen that general paralysis constitutes a public health problem of the first magnitude. What can be done to control it? The relation of general paralysis to syphilis needs no discussion in this connection and so we can turn to a very brief consideration of the means at our command for doing the only two things which can lessen the number of cases of general paralysis. The first of these is preventing well persons from being infected with syphilis; the second is preventing syphilitics from having general paralysis.

The first problem belongs to venereal prophylaxis, a field of preventive medicine in which a few definite lines of attack have been established and in which many agencies are at work. Theoretically this is as hopeful a field as any in the prevention of disease. Practically it presents apparently insurmountable difficulties. The prevalence of syphilis depends upon prostitution more than upon any other cause, and this great problem is so woven into every phase of civilized life that one wonders if it is within the power of the race to cope with it. If the prevention of syphilis is not an encouraging field for sanitation, recent work in the army and navy has shown us that it is a most promising one for hygiene. The success of personal prophylaxis is the bright spot in a gloomy picture.

The most interesting contribution which we have to make from psychiatry is information regarding the amazing prevalence of a result of venereal disease which has thus far escaped adequate attention, even on the part of those especially interested in venereal prophylaxis. This may not be the most important contribution, however, for the impression is gaining ground that the facts which psychiatry is gleaning regarding the springs of human conduct may serve the high purpose of enabling us to deal better with the problems of personal life. The deeply-rooted institution of prostitution depends for its continued existence

most upon our failure to meet sexual questions frankly and courageously. Perhaps when certain mechanisms which clinical studies in psychiatry are defining become fully understood, clearer vision and the liberation of powerful new resources may enable mankind to deal with prostitution as it is dealing with religious intolerance, political inequality and some of the diseases which menace human life and happiness.

Preventing persons with syphilis from developing general paralysis belongs partly to our own work. It is possible that moderation in the use of alcohol, avoidance of mental stress and attention to many factors in personal hygiene may help in preventing a person who has syphilis from having general paralysis. We do not know. There is urgent need for research in these matters. Our text-books are filled with ancient references, most of which have never been sufficiently verified or scientifically studied. Whatever information future studies may give us regarding the exact influence of such factors, it can be said at the present time that early, continued and effective treatment of syphilis constitutes the only means of prevention which is plainly indicated. Fournier tells us that only five per cent of paretics have gone through an adequate course of treatment for syphilis. On the other hand we are told of many instances in which general paralysis has followed the most efficient and intensive treatment. All references to this subject in the literature relate to events which happened before salvarsan had been added to our resources in the treatment of syphilis. The period which has elapsed between the general introduction of this remedy and the present time is shorter than the average period between infection with syphilis and the development of general paralysis. We are able now to judge of the efficiency of treatment by serological findings. With such resources at our command, we should be trifling with prevention in general paralysis if we failed to enter upon a vigorous campaign for treatment of all cases of syphilis.

The first step in such a program is greatly to extend our means of detecting syphilis. A "Wassermann survey" is planned for a large group of applicants for enlistment in the United States Army. We should make such a survey at once in the groups of the civil population which receive public support. It is absurd to record cranial measurements of men and boys in our prisons and

reformatories and not to ascertain by this simple means whether or not they have syphilis. Children should not be "placed out" until a negative Wassermann test has been obtained. The Health Department of New York City now furnishes outfits for collecting blood and performs the test free. The State Department of Health should make this means of diagnosis available in every hamlet.

These are matters in which we are interested only as physicians and good citizens. There are, however, persons in the community with whom members of this association have especial contact. These are the relatives of the paretics in our public institutions. In at least three state hospitals the practice has been adopted of sending for the wives or husbands and children of patients with general paralysis, explaining the nature of the disease to them and having Wassermann tests performed without cost. The result has been the detection of a striking number of cases of syphilis. The superintendent of one hospital has made arrangements with a general hospital in the city so that such patients can be immediately treated. The practically unanimous willingness of the relatives of patients to have this test performed is not surprising, because it is a common occurrence when a person dies from tuberculosis for the relatives, although in perfect health, to request to have tests made to determine if they, too, are afflicted with the disease.

The chief obstacle to the treatment of known cases of syphilis is its cost. I know from personal observation that cases with contagious lesions of syphilis are turned away from one of the largest public hospitals in New York City if they are unable to pay for the treatment. In many other hospitals a single injection of salvarsan will be given free, but the treatment discontinued if patients are unable to pay. It is difficult to conceive of a more short-sighted policy than this. One man in nine who die between the ages of 40 and 60 dies from general paralysis, and yet the only means we have of preventing a person with syphilis from having this disease is thus deliberately withheld. The health authorities would permit no other communicable disease to be dealt with in this way. If the prevalence of such a frequent and fatal termination of syphilis as general paralysis were made generally known, a most important step would be taken toward changing this

practice. I believe, however, that the only way in which we will be able to deal effectively with the problem of the treatment of syphilis is to place it wholly in the hands of public health officials. I believe that the health departments of cities should take up this matter vigorously and require general hospitals to report all cases of syphilis applying for treatment, together with information as to whether treatment was given or refused. Providing hospital accommodations for indigent cases of syphilis, at least during the period of active treatment with salvarsan, is as distinct a duty of the health department as it is to provide for cases of tuberculosis who are cared for under surroundings which tend to extend the infection to others.

The problem of general paralysis has been considered from the point of view of preventive medicine. I believe no more effectual way exists of dealing with it and the disease upon which it depends than to awaken the health officials of our cities and states to a responsibility which they have long neglected. One may search the publications of American state and city departments of health in vain for any reference to the importance of general paralysis or to its relation to syphilis. Dissertations will be found upon pellagra (which caused no deaths in New York State during 1913), and upon leprosy (which caused one death). Pages are devoted to smallpox (which caused one death), and references will be found to the latest work in tropical diseases, but one will find nothing about the great enemy to human life which we have been considering. Is it not time for psychiatrists to bring this important public health problem to the attention of public health officials?

## THE PATHOLOGY OF GENERAL PARALYSIS.

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In discussing the pathology of general paralysis we shall regard it as a disease etiologically dependent on the spirochaete pallida, but justly to be kept separate from other forms of cerebral syphilis, for reasons which will appear later.

General paralysis, according to the best evidence obtainable at the present day, is only about two hundred years old; it depends absolutely upon previous syphilitic infection, and comes on after an interval of about five to twenty years. Syphilis, however, had been known in Europe for hundreds of years before anything resembling general paralysis was described. If our historical information is correct, syphilis was introduced into Spain in 1493 by Columbus's sailors, who had become infected in the Island of Hayti, and the next year it spread as a very fatal epidemic to Italy and France. Even now among primitive races (*e. g.*, the natives of the North African provinces) where syphilis is rampant, general paralysis is practically unknown. As syphilis lost its severe epidemic qualities, and, in the course of centuries, became a milder disease, general paralysis became gradually more frequent. It, too, in some of the civilized races to-day, according to certain observers, is gradually changing its character; it is said to be milder, with a rather longer course, fewer convulsions, and the demented forms are said to be more frequent; Spielmeyer even suggests that it may eventually disappear.

Previous to 1904 the gross changes in the brain of general paralysis were well known, and many of the finer changes had been described, especially degeneration and loss of nerve cells, loss of nerve fibers, and increase of neuroglia; these finer changes, however, formed part of a rather vague and uncertain disease picture, until Alzheimer, in his classical monograph in 1904, estab-



lished general paralysis on a firm anatomical basis. The facts then established have since been confirmed and amplified by others, and are now well known. In 1912 to 1913 a new impetus was added to investigation, and especially to treatment, through the demonstration by Noguchi and Moore of the spirochæte pallida in the brains of general paralytics, thus proving this disease to be dependent, with hardly a doubt, on the presence of the same organism as that found in syphilis.

In addition to the degenerative changes previously established, Alzheimer showed everywhere, not only in the gray, but also in the white matter of the brain and spinal cord, a chronic inflammatory process, with a perivascular exudate consisting mainly of lymphocytes and plasma cells. The central nervous system is shot through and through by this inflammatory process; no part of it is spared, but the intensity of course may vary greatly in different parts. The frontal lobes are regularly the parts most affected, but other regions may be as much involved, or even more so, and at times in such a circumscribed way as to cause perfectly distinct focal atrophies. A peculiarity of the exudate in general paralysis is that, within the nervous tissues, it is strictly confined to the sheaths of the blood vessels, usually going even into the smallest branches; in the pia mater, however, there is no such restriction of the exudate to the vessel sheaths.

It is on this characteristic distribution of the exudate (*i. e.*, its restriction to the vessel sheaths throughout the whole central nervous system) more than on any other one thing, that the diagnosis of general paralysis rests to-day, and not principally on the character of the cells in the exudate itself; the nervous tissues have only a limited number of responses to irritants of whatever kind, and lymphocytes and plasma cells may be found in many other diseases of the brain or cord, and, as such, are in no way characteristic, unless characteristically distributed.

This pattern of general paralysis applies generally to perhaps ninety-five out of one hundred cases, but pathology has shown an almost bewildering variety of minor changes and subvarieties coming under this general paradigm; such, for example, are differences in the localization, or in the intensity of the inflammatory reaction, which may be extremely mild or very intense; differences in the position, or in the extent of the degenerations in the nervous tis-

sues of the brain, or of the spinal cord, or even in the nerves themselves, especially the optic nerves; then there is the presence of unusual degenerative products; for example, colloidal changes in the cortex or marrow; occasional vascular narrowing or obliteration is also found in the form of typical Heubner's endarteritis, with the necessary sequelæ of focal softenings and focal symptoms.

The pathologist wonders, in the presence of these changes, so varied in position and in degree, that there can be such relative uniformity as usually exists in the clinical picture of general paralysis, and looks upon the clinician as an unreasonable sort of being, if the latter happens to insist on an attempt at close correlation between the antemortem symptoms and the postmortem findings. Roughly we can say, of course, that where destruction of nervous tissue is widespread and great, mental deterioration is practically certain to be profound, but the memory defect, speech defect, expansiveness, general deterioration, and even the physical signs, often appear to bear little intimate relation to the amount of inflammatory or degenerative reaction, and we cannot correctly predict beforehand whether we shall find anatomically a tremendous generalized reaction, or a slight one, or a spotty one. One would be rash indeed in attempting, at the present stage of our knowledge, to correlate, for instance, a disturbance of function, such as speech defect, in a disease of this character, where no part, from the cortex to the end organs of speech production, can be counted on to be strictly normal—how can we put our finger on a certain spot, or series of spots, and say "this is responsible for the speech defect," especially as we are far from knowing the cellular mechanisms of normal speech, and their connections one with another?

#### THE RELATION OF GENERAL PARALYSIS TO CEREBRAL SYPHILIS.

Leaving out for the moment the etiological factors, the above brief description of general paralysis as a subacute or chronic inflammatory and degenerative process, which goes through and through the great central nervous organs, is correct for most cases. The varieties of cerebral syphilis on the other hand, for the most part, play around the surface of the central nervous system, instead of going all through it; that is, the lesions, or ex-

updates, which characterize these varieties are confined largely to the meninges, and to the blood vessels within the meninges, and there is rarely much, if any, essential exudate in the underlying nervous tissues.

We hardly need to recall the main types of cerebral syphilis, the gummatous, the meningeal, and the vascular forms and their combinations, except to state, that in the so-called meningeal type there are cases, and they are not rare, the symptoms of which come on many years after the primary infection, just as in general paralysis. In most of these meningeal cases the lymphocyte and plasma cell exudate behaves as it is expected to do, and is limited to the meninges, but sometimes, especially in certain regions (gyrus rectus or temporal lobes), a slight exudate is also seen in the depths of the nervous tissues, sometimes as a plain extension inwards from the meninges, but at times no evidence of such extension can be seen; we thus, in rare cases of cerebral syphilis, have patches in the cortex that look just like general paralysis, especially like general paralysis of long duration, where regularly only a slight exudate is present. So the boundaries of general paralysis, usually sharp are not always so, and occasionally it is almost impossible to say whether we have under the microscope mild general paralysis, or the meningeal form of late cerebral syphilis.

Clinically the same difficulties of differentiation in the two groups are met with; the Wassermann reaction often fails to settle the question, and the results of specific treatment have been of but little help, as they are about the same in both cases. The question, viewed from the larger aspect, is hardly worth settling, for general paralysis and the form of cerebral syphilis under discussion should be looked upon as varieties of the same fundamental process, with the same etiology, with much in common clinically and pathologically, and with no clear border-line. Moreover, we still classify as general paralysis a set of cases in which the inflammatory reaction, although typical in form, and ubiquitous in the central nervous organs, is chiefly situated around the larger and longer blood vessels, the smaller vessels being nearly clear; some of these cases (evidently near relatives of cerebral syphilis) give, like the latter, a positive Wassermann reaction in the blood, but a negative Wassermann reaction in the spinal fluid.

Our concept of general paralysis therefore must be kept sufficiently open to admit some of the conditions formerly regarded as syphilitic; and our concept of cerebral syphilis, on the other hand, will probably not suffer by extending it to admit a wider range of what looks like general paralysis.

We next turn to the meaning of the various reactions in general paralysis. That both the inflammation and the degeneration are a response to the presence of the spirochæte pallida, or to its toxin, spread widely through the nervous system, we can hardly doubt; but owing to the difficulty of demonstrating this organism extremely little is positively known of its regional distribution. It is most disheartening to imbed section after section in cases where areas of intense reaction alternate with nearly normal portions, and to find, as the end result of many hours or days of endeavor, that none of the preparations have been successful on account of the capriciousness of the method. Noguchi has examined material from numerous cases, but from only a few areas of the brain in each instance; he found spirochætes in about 25 per cent of the cases examined, mainly in the gray matter, occasionally in nerve cells, but as a rule not near the blood vessels.

We might assume, in contrast to general paralysis, that in cerebral syphilis there is a restricted spread of the organism and that, like the exudate, the organism also is limited chiefly to the meninges or blood vessels; but although there are cases which support this view, positive proof is lacking. It seems, in general paralysis, that in those areas where the reaction is greatest spirochætes are not necessarily present, or at least have not been found, and there is fair evidence to indicate that the reaction moves from place to place in an intermittent way, and that some areas may become quiescent, while in others there is advance. In some of the cases of long duration it looks as if this quiescent state had become general; at any rate the process throughout the brain is extremely slight, so that a step further would mean recovery; and it is not certain (though as yet unproven) that rare cases of spontaneous recovery may not exist. We cannot demonstrate, then, that extreme local damage in the nervous tissue corresponds to great local concentration of the spirochæte or its products, and that slight diffuse damage means the reverse, though this seems highly probable.

Cases have been observed in which, without the pre-existence of any obvious psychosis, general paralysis was discovered after autopsy; moreover deaths in remission, where mentality was fairly well restored, have also shown well-marked active general paralysis; besides, in cases of sudden onset, or of very short course, we have strong reason to believe that the anatomical reaction was well advanced long before symptoms attracted attention. This occasional apparent freedom from symptoms, in the presence of an active process of general paralysis, brings us to another one of the unsolved problems; namely, as to what becomes of the spirochæte in the free interval between the time of syphilitic infection and the outbreak of general paralysis.

It is known that the body tissues do not always present a visible reaction to the presence of the spirochæte pallida; the heart muscle, for example, may be flooded with the organism and show practically no response; it therefore seems that this slowly growing organism may live, for a time at least, in harmony with its host, with its capacity for harm latent, so to speak. We must assume, in our ignorance of the life history of the pallida, and of its biological cycles, if such exist, that in general paralysis the organisms are in some way downed and held in check for a number of years, to become obviously active when conditions are favorable; for that there are conditions which, in conjunction with the indispensable organism of syphilis, determine the development of general paralysis, seems beyond doubt; what these conditions are forms another problem for the future.

We might put the problem in this form: "What is needed besides syphilis to produce general paralysis?" We know from the studies of investigators, like Fournier, Mattauschek and Pilcz, and others, that it is those cases in which preceding syphilis has been very mild that are especially prone to develop general paralysis; that is, it occurs more often in persons who have reacted only slightly, or as some say, inadequately, and without a sufficient production of antibodies, to the original infection; among races and individuals where the reaction has been violent, general paralysis is much less likely to appear. We cannot say whether it is a special strain of the spirochæte which is responsible for this mild syphilitic reaction, and the later sequel of general paralysis, or whether it is a strain especially attracted to the nervous system,

a "neurotropic" variety, as some have supposed, or whether certain biological changes wrought in the spirochæte by its sojourn in its host during the intervening years have rendered it more prone and fit to invade the nervous tissues, which in their turn may have been rendered more susceptible to attack. Noguchi found some experimental evidence for the existence of a special strain in the fact that the organisms, obtained from cases of general paralysis, had an unusually long incubation period.

The same lack of acquaintance with the life history of the spirochæte, especially in human beings, clouds the question of successfully eradicating it from the nervous system by treatment. One difficulty here is certainly the relative inaccessibility of the central nervous system to drugs; for an organism situated, as this is, in the depths of the nervous tissue, and producing lesions through its whole extent, is reached and attacked by drugs only with the greatest difficulty. Remedies introduced even through the blood, no matter how diffusible they may be, hardly enter the tissues of the brain and cord at all, and while salvarsan seems a more powerful agent against the organisms in other parts of the body than any of the other specific drugs, and while the local use of salvarsanized serum through the cerebrospinal fluid seems most rational, it is yet too early to know whether the spirochæte is only retarded or rendered latent by this method, or whether it can be sufficiently gotten at to be completely eradicated.

It seems fairly certain, from the standpoint of pathology, that prolonged and rigorous general treatment should be combined with local treatment, and that both should be pushed to the limit of safety; for general paralysis is more than a local disease; the spirochætes have been demonstrated not only in the tissues of the central nervous system in general paralytics, but they have also been reported, by means of experimental inoculations, in the cerebrospinal fluid of such cases and, in a few instances, in the circulating blood of general paralytics; besides this, inflammatory changes in the peripheral nerves similar to those seen in other parts of the nervous system in general paralysis have already been referred to. Much of the later work on the blood and spinal fluid needs control and checking by autopsy, in order to be sure that cases reported are unquestionable general paralysis, but it seems fairly safe to say to-day, that *general paralysis is essen-*

*tially a generalized infection with the spirochæte pallida, in which the central nervous system stands out more prominently than any other part.*

Any method of treatment which will arrest or cure this fatal disorder is most welcome, but on anatomical grounds I feel most strongly that in many cases by the time the diagnosis can be made much damage will have already been done. I look to *prophylaxis in syphilis itself* as the great hope of the future.

## DIFFERENTIAL DIAGNOSIS OF GENERAL PARESIS.

By ADOLF MEYER.

It is not so very long since Klippel and Hyslop spoke of the general paralyses in the plural, evidently under the impression that there was more than one type of destructive brain disorder progressive if once started upon; perhaps subject to temporary arrests, but bound to progress to a fatal end, more or less directly referable to the brain condition. This hypothetical group would represent what Stanley Hall very brightly called "thanatic (or deadly) dementia." We do indeed know a number of such processes. But when we speak to-day of general paralysis or paresis, we mean to exclude all the simple senile, focal organic and toxic and other diffuse progressive affections like arteriosclerosis, multiple sclerosis, progressive chorea, and Alzheimer's disease, which do not present the histological picture clearly accepted and marked off since Nissl's and Alzheimer's studies. The unclassified residuum is decreasing so that we do not care to give a whole group of cases a questionable all-embracing nimbus by naming the *unknown*. At the same time, we do well to respect the existence of this unclassified residuum and the occasional cropping out of the term pseudo-paresis.

What *we* are concerned with is *paresis* with a practical and sufficiently decisive definition based on the cases studied to the end, *i. e.*, studied with the inclusion of the best possible post-mortem technique. This condition might, of course, leave out, or make appear as very rare, those cases in which a transitory disorder diagnosed as general paresis either failed to be progressive or came to a practical recovery and away from neurological post-mortem services, so that few of these cases would be examined by those experienced in the differential histology of these conditions, and few would appear in our discussion. It is quite probable, therefore, that we shall make our definition more and more clinical in a measure as our laboratory methods become safe and convincing. We shall indeed see that for practical working we come close to accepting the Goldsol reaction as the starting point and central factor of definition.



The diagnosis of general paresis aims at the singling out of the cases of a diffuse progressive parenchymatous syphilis with preponderance of the loss of tangential fibers and other nervous structures, with neuroglia overgrowth, disorganization of the lamellation of the cortex, an infiltration of the sheaths of the small and medium vessels with plasma cells and lymphoid cells, and occasional local devastations. From a fairly noteworthy number of cases we may generalize that general paresis is an invasion of the brain by spirochætes with a parenchymatous reaction, and a more or less incidental mesoblastic response (Weigert).

When we speak of "diagnosis of dementia paralytica" we mean thereby the distinctive formulation of the facts which are clinched by the concept of progressive parenchymatous syphilis of the brain, in distinction from other progressive reductions of the brain and conditions *resembling* such a process, or in distinction from processes which are *not* progressive and perhaps not even evidence of a distinctive brain damage.

The diagnostic problem is most difficult where we deal with processes also on a luetic basis, but with a different type of lesion; the diffuse luetic meningitis and gummatous processes; the luetic vascular affection of the smaller vessels; and the tabetic conditions with non-paralytic psychoses. It does also create considerable perplexity when we deal with a patient with evidences of syphilis, and symptoms of neurasthenia, arteriosclerosis, senility, epilepsy, alcoholism, multiple sclerosis or functional psychoses, such as manic-depressive cycles or excitement and toxic psychoses. The question in these latter cases and in simple tabes is: What functional states give weight to the suspicion of or certainty of the existence of general paresis? To which we may reply: Evidently the characteristic disorganization of the personality and the cardinal findings in the cerebro-spinal fluid.

The best evidences of a parenchymatous syphilis are:

(1) The findings in the cerebro-spinal fluid. Historically the points of importance are:

- (a) The platinum-chloride reaction of Mott and Halliburton.
- (b) The demonstration of a pleocytosis (with plasma cells).
- (c) The demonstration of globulin.
- (d) The complement fixation according to Wassermann.
- (e) The colloidal gold chloride or Goldsol reaction.

In importance these rank as follows:

(a) Complement fixation with various antigens.

(b) The gold chloride reaction, if it involves the total discoloration of the first five dilutions, and relative discoloration of the dilutions 6, 7 and 8.

(c) The presence of globulin either in the form of the first phase of Nonne-Apelt or with Noguchi's butyric acid test or the Ross-Jones test.

(d) The presence of more than 10 or 12 cells per cmm., especially when there are plasma cells, and no leucocytes.

Of all these, it would seem to-day that the colloidal gold reaction would offer the most distinctive findings. A slight pleocytosis and traces of globulin may also occur in brain tumor.

(2) The findings from brain-puncture, first applied by Pfeiffer, too radical a measure and not sufficiently certain to furnish conclusive information, but possibly more worth considering in connection with cerebral introduction of curative fluids.

(3) The 'cerebral symptom-complex' of general paresis is far from being conclusive except where diffuse cerebral symptoms and certain eye-symptoms combine with the specific paralytic signs. The eye-symptoms, irregular and sluggish and especially Argyll Robertson pupils, are most helpful, if present, and lead over to the tabetic symptom group. The typical cerebral disorders are:

The speech disorder.

The writing disorder.

Tremor.

Difficulty of coordination and of relaxation and overflow.

Innervation.

Exaggeration of tendon-reflexes occasionally with ankle clonus, but relatively rarely with Babinski sign; at times with a combination of exaggeration of reflexes and hypotonia.

More or less typical cerebral attacks (see below).

Most of these symptoms occur also in toxic states and among these I want to mention especially the *bromide intoxications* which can simulate general paralysis more closely than any other drug-induced affection.

(4) The tabetic symptom-complex; especially the eye-symptoms; simple sluggishness of pupils and absence of the secondary reaction of Weil, and distinct irregularity or Argyll Robertson

pupil, while mydriatic palsy belongs to the type of mesoblastic syphilis and a spasm of the sphincter may occur in hysteria (exposed by cocaine) and inequality of the pupil is omnipresent. With all this, we expect:

(5) Evidence in the *mental functions*; progressive loss of memory (occasionally slight when the lesions involve mainly the right hemisphere), change of the personality, indifference to the discrepancies of dates and memory, lapses of behavior, variable emotionality and suggestibility, euphoria and certain superimposed reactions of predilection, such as the exalted polypraxia or the absurd hypochondriacal states. It is specially important to realize that there is no symptom-complex from neurasthenia, hysteria, delirium to manic-depressive and paranoic reactions which would as such exclude the possibility of a paresis. On the other hand, a number of these can be complicated by signs of nervous instability which might simulate general paralysis.

(6) Combined mental (or psychobiological) and neurogenic attacks of the character of apoplectiform or epileptoid reactions, usually appearing in the form of a status, with prolonged coma and with varying, but usually not lasting, Jacksonian or focal symptoms; occasionally epileptoid states of bewilderment and amnesia or fugues; rarely clean-cut epileptic attacks (which is more frequent in otitis gummosa and the like).

The most difficult issue is presented by *tabes*. A frank segmental tabes with the classical symptoms is relatively rare in the cases which succumb to the cerebral parenchymatous syphilis. The following contrasts are worthy of attention:

TABES.	TABO-PARESIS.
The initial symptoms plain: shooting pains, frequent girdle sensation and numbness.	The initial symptoms often missing; often unheeded; on the other hand, at times simulated by "distraction analgesis."
Transitory ocular palsies.	Rarer.
Typical ataxic gait and Romberg symptoms.	Rarely typical.
Argyll Robertson pupil.	Equally frequent.
Absence, or difference of tendon reflexes with hypotonia.	" "
Radicular zones of anæsthesia.	" "
Trophic disorders (Charcot joints, pemphigus, etc.).	" "
Optic atrophy.	" "

While *tabes* does not imply immunity against general paresis, there remains the fact that only a small percentage of the cases with frank *tabes* develop general paralysis. Hence the initial symptoms of *tabes* are not of especially bad omen, unless they occur together with *cerebral symptoms*, such as transitory aphasia, or transitory palsies, or development of irregular tremor of face, tongue and hands, speech disorder, writing disorder; difficulties in limited innervation and relaxation, and the mental symptoms.

In *tabes* with non-paralytic psychoses Henderson emphasizes the absence of any memory defect, and the absence of speech and writing defect and of facial tremor.

*Brain-syphilis*, in the sense of *mesoblastic syphilis*, vascular, meningeal or gummatous, in a remarkable percentage of cases fails to give the typical reaction of the cerebro-spinal fluid. According to the excellent study of Dr. Henderson, cerebral syphilis is rarely a *late* sequel of infection. The neurological symptoms are multiple-focal and not diffuse. The Argyll Robertson pupil belongs to the *parenchymatous syphilis*. The mental symptoms are those of all organic disorders (memory and retention defects, states of confusion and hallucinations), but with relatively little unaccountable and fundamental change of character and dilapidation of the personality. Euphoria and expansiveness may occur in mesoblastic syphilis as well as in the parenchymatous type.

The formerly much-dreaded confusion with neurasthenia is no longer an issue except where the examination is insufficient.

Alcoholism is apt to simulate the cerebral symptom complex of tremor, speech defect and even sluggishness of the pupil.

Bromide and other toxic states are apt to simulate paresis very closely, but do not imply a spinal fluid finding. It is especially important to know that in bromide delirium the exaggeration of reflexes and weakness or numbness is by no means necessarily symmetrical.

Frontal lobe and other tumors may lead to some difficulty, owing to the euphoria and non-appreciation of the seriousness of the condition, and the growing inattention to the sphincters. A slight pleocytosis and slight globulin reaction may occur. On the other hand, *focal paresis may simulate brain tumor*, owing

to its progressive character, especially where the affection is in the right hemisphere and the memory-disorder is correspondingly slight.

The *examination of the blood* is to-day an almost obligatory measure. The *examination of the cerebro-spinal fluid* implies rest in bed for at least 24 hours and enough inconvenience to call for special indications. Experience with at least one recent failure of diagnosis in a patient who, by the way, had refused lumbar puncture, but has since been examined elsewhere under *commitment*, makes me inclined to consider an examination of the cerebro-spinal fluid *mandatory wherever there is the slightest indication of suspicion or uncertainty*, and a wise precaution where there is any doubt. A negative blood reaction does not make unnecessary a study of the cerebro-spinal fluid.

It is, I think, necessary to emphasize that *the diagnosis of the parenchymatous process is but the beginning of the diagnostic discrimination*. Beyond this initial fact, there are many very important points to be settled.

(1) The character and recoverability of any *incidental disorders or complications*; in other words, the chance that one or the other feature is not paretic, but a coincident independent event.

(2) The chances for remissions.

(3) The localization of the process if it is at all localizable.

In this connection we meet the decided difficulty concerning *the question when a case should be considered recovered or free of general paralysis*.

Fr. Schultze observed a case of tabo-paresis in a man of 49, who was discharged from the institution after  $1\frac{1}{2}$  years. He died of cancer of the pancreas  $14\frac{1}{2}$  years later, without any further paretic symptoms or progress of his tabes. Alzheimer found the infiltrations too slight and the damage to the nerve elements too great for general paresis, but similar to the so-called stationary paresis.

*The diagnosis of stationary paresis* would most probably depend on the findings in the cerebro-spinal fluid, the persistence of which would almost inevitably indicate a progressive process, to judge at least by the observations in stationary tabes.

Considering the occurrence of mixtures of the parenchymatous and mesoblastic syphilis, there will always be a certain percentage of cases in which only the results of treatment or the anatomical study will bring certainty. It may, however, be possible that a better knowledge of *strains of spirochata* will give us some help in diagnosing the relative liability of any case with syphilitic infection being among the  $4\frac{1}{2}$  per cent of the cases of syphilis that develop general paralysis. The light forms of primary and secondary reactions certainly preponderate in our records, more than would be accounted for by forgetfulness and defective history-taking.

Spiller and Dana, who, no doubt as neurologists, see a larger number of cases in whom the graver mental symptoms are not preponderant, have for years voiced their feeling that general paresis and cerebral syphilis cannot seriously be separated. They probably would not even make the modern distinction of mesoblastic and parenchymatous syphilis or consider it clinically or histologically practicable. Spiller is influenced by histological considerations in which I believe the discrimination of detail of the methods employed by Nissl and Alzheimer is not sufficiently used, so that the margin of histological uncertainty is exaggerated. Dana stands on the ground of therapeutic optimism without histological control. Hence his repeated appeal for recognition of the recovery of early "preparetic" cases with or without antiluetic treatment of the older methods and with statistical results which the advocates of the Swift-Ellis or the cranio-spinal flushings do well to bear in mind. Since I have seen more cases outside of hospital practice, I certainly have come across a small number of cases in which the neurological and serological status left no doubt, but in which the behavior aspect did not make it easy to say whether the moment of certifiability had arrived and legal steps could be enforced, especially where family conflicts existed. It seems, however, that to-day most judges and lawyers have become familiar with the disastrous results of general paresis. They are willing to proclaim their "non-compos mentis" because they assume that the brain-cells are disorganized in this disease, as a lawyer recently put it. It is certainly wisest that every patient with positive colloidal gold chloride reaction and other warnings should be induced to put himself

on the safe ground of an equivalent of guardianship by putting his business interests in trust or into the hands of legally supervised friends, and it would seem wise to create a public sentiment in favor of such a practice. This practical question should be put far above mere academic hesitation and dispute. The step can never *hurt*, except possibly crooked interests; and its wider acceptance will do much to soften the notions about the meaning of what now figures as declaration of insanity.

## A REPORT OF FIVE CASES OF THE INTRACRANIAL INJECTION OF AUTO-SERO-SALVARSAN.

BY DREW M. WARDNER, M. D., CEDAR GROVE, N. J.

It is generally conceded that the so-called parasyphilitic disease, general paralysis, although due, as has been recently shown by Noguchi and others, to specific infection of the central nervous system with the treponema pallidum, is seldom, if ever, capable of being influenced through the medium of the blood by any of the antisyphilitic drugs at our disposal.

The reasons for this have been adequately demonstrated in the preceding papers. That these drugs cannot be injected into any part of the central nervous system without the possibility of dangerous results has also been shown. That one of these drugs, viz.: salvarsan, can be so modified as to permit of its injection into the central nervous system has been established by Swift and Ellis of the Rockefeller Institute. Whether such a modification of salvarsan when introduced directly into some portion of the central nervous system is capable of influencing in any way the course of general paresis, it is in part the purpose of this symposium to show. It is unnecessary to describe here the preparation of the Swift-Ellis serum, with which all our cases have been treated.

It is at once apparent that, in a general way, two different methods of applying the serum are open to us. That is to say, it may be introduced by lumbar puncture into the subarachnoid space of the spinal cord, or through a trephine hole in the cranium into some portion of the brain or its meninges.

The intraspinal method has been too well described by Dr. Cotton to need any further elaboration here. Dr. Cotton's results seem to be excellent and distinctly encouraging. At the same time this method in other hands has not always met with such pronounced success. Hough sums up the work of Swift and Ellis of the Rockefeller Institute; Myerson of the Psychopathic Hospital, Boston, Mass., and Asper of Baltimore, as follows:



There has been marked improvement in the syphilitic inflammatory processes and in many cases the patients with tabes especially, have shown pronounced clinical improvement. Drs. J. A. Cutting and C. W. Mack, of the Agnew State Hospital, California, summarize the result of the treatment of nine cases of general paresis as follows: The most striking result of treatment is the reduction of the cell count, while a review of the mental symptoms is not very encouraging. Dr. Martland and Dr. Beling, of the City Hospital, Newark, have treated six cases of general paresis and cannot report improvement in their condition. We have treated five cases at our hospital by the intraspinous method without improvement in any case. Dr. Edward Mapother and Dr. Thomas Beaton of London have treated four cases without much change in the mental condition.

In view of these rather discouraging reports, and bearing in mind the fact that the disease was incurable, we believed that a more radical procedure was justifiable. That is to say, we believed it was justifiable to inject the remedy into the brain or its meninges. As for the theoretical advantage of intracranial procedures in general the following statement in the *British Medical Journal* by Dr. Harry Campbell is of interest. He says:

The problem, therefore, which confronts us in the treatment of parenchymatous syphilis is how to get the spirillicidal antibodies to enter the perineuronic lymph stream. This end can be gained by intrathecal injections of salvarsanized serum. Whether or not we accept the view of Mott—that the cerebrospinal fluid constitutes the lymph of the central nervous system—certain it is that substances introduced into the subarachnoid space do actually penetrate the central nervous system. If tripan blue be injected through a trephine hole into the cranial subarachnoid space above the tentorium cerebelli, not only the cortex cerebri but the entire cerebrospinal axis is found, post mortem, to be stained. If on the other hand the pigment be injected into the spinal subarachnoid space by means of lumbar puncture the cortex cerebri remains unstained, the staining in these cases being confined to the spinal cord and brain stem. It would appear that the cerebrospinal fluid flows from the cranium spinalwards, probably in meager current, and also that some slight ebb or flow takes place between the fluid in the subarachnoid space at the base of the cranium and the spinal subarachnoid space in accordance with the variations in the quantity of intracranial blood.

It will thus be seen that intrathecal spinal injections afford a ready means of bringing remedial agents into immediate relations with the neurons of the spinal cord and brain stem. While it is probable that the

neurons of the cortex cerebri may in some degree be reached in this way, a far more effectual way of reaching them would undoubtedly be by injecting the cranial subarachnoid space through a trephine hole.

Furthermore, post-mortem injections of carbolfuchsin into spinal subarachnoid space have been made both by us and Dr. Martland of the Newark City Hospital. In no case, however, even with the body placed with head down and in an almost erect position has any staining of the structures beyond the posterior fossa been observed.

Having decided, then, to undertake the intracranial injection of the salvarsanized serum, it was only necessary to cast about for a *modus operandi*.

Four different procedures were open to us: (1) Nisser and Pollac's method of injecting the remedy by means of a small drill introduced beneath the dura through a small area of frozen scalp. (2) Into the subarachnoid space through the orbit, as shown by Beriel, of Lyons. (3) By means of callosal puncture as used by Foerster in Germany and by Dr. Harry Campbell and Mr. Balance in London. (4) The introduction of the remedy subdurally through a trephine hole in the skull, which procedure seems to have been first reported upon by Levaditi, Marie and Martel in December, 1913. It seemed to us that until the value of intracranial injections of salvarsanized serum could be put upon a firm basis that the safest of these procedures, that is to say, the one that was less likely to cause damage to the brain structures, was the one to be experimented with. The first three were set aside as being difficult of application and decidedly risky. The requirement of safety seemed to be best fulfilled by the fourth of these methods, that is to say, by the injection of the serum through a trephine hole in the skull. Accordingly, in conjunction with Dr. Martland, Dr. Eagleton and Dr. Beling, of Newark, we evolved the following operative procedure:

The preparation of the serum is carried out in accordance with the Swift and Ellis technique, viz.: On the day previous to the operation the patient is given an intravenous injection of neo-salvarsan .9 gm.; one hour later about 6 oz. of blood are drawn from the median basilic vein. This blood is set aside to clot at room temperature for about three hours, and is then put in the ice box at a temperature approximating 10°C. until the following

day. The clear supernatant serum is then poured off, centrifuged and mixed with its own bulk of normal saline solution. It is then heated to 56°C. for half an hour and is again placed in the ice box until ready for use. The patient is prepared for operation and given an ether anæsthetic. The trephine hole is bored as nearly as possible over the precentral gyrus. As soon as the dura is exposed a lumbar puncture is performed and about 20 cc. of spinal fluid drawn off. The dura is, as a rule, found rather tense and enough fluid is abstracted to relieve the tension and allow the respiratory fluctuations of the membrane to be plainly seen. When this effect is accomplished the needle is inserted through the dura and about 30 cc. of the previously prepared mixture allowed to flow in by gravity. The apparatus used is an all-glass, 30 cc. Luer syringe, with about 18 inches of rubber tubing attached and an ordinary small caliber salvarsan needle bent upon itself at about a quarter of an inch from the point. After some experience with the cadaver and living subject we find that an opening not less than 2 cm. in diameter is sufficient for the safe introduction of the needle. If the above conditions are complied with the fluid, as far as our experience goes, invariably flows in readily by gravity.

CASE 1.—Male; white; 33; married; Pole; tinsmith. Admitted to the hospital June 8, 1912. At this time his wife stated that during the past six months the patient had become nervous, irritable and depressed. He was easily fatigued and had been obliged to give up work. His memory had become so bad that he invariably forgot the errands upon which he was sent. He was exceedingly gluttonous and ate and drank everything he could lay his hands on. He seemed to have lost all interest in his former pursuits and even his affection for his family. Past History: Negative. Venereal: Denied. Habits: To have been good. Physical Examination: Showed a well-developed, somewhat emaciated man. Facial expression vacant. Pupils equal, round, centrally placed and react sluggishly to direct illumination. The facial muscles and the fingers showed a well-marked tremor; the tongue on protrusion a trombone movement. The upper lip was raised with difficulty. Knee jerks were greatly exaggerated. No Babinski, no Oppenheim, no clonus. The gait was shuffling. The co-ordination tests were poorly performed and he had a slight Romberg. Speech showed a marked defect. Otherwise the physical examination was negative. Mentally: He was disoriented as to time, place and person; depressed, forgetful and untidy about his person. No delusions or hallucinations were brought out. The spinal fluid showed excess of globulin and increase of cells. The Wassermann was plus, both in spinal fluid and

blood. He rapidly became more helpless and demented, and on December 12, 1912, he became permanently confined to bed. Examination January 29, 1914: Pupils are equal and regular; do not react to direct or consensual light. Knee jerks are exaggerated, especially on right side. Ankle clonus present; no Babinski. Has well marked apraxia and dysphagia. Cannot walk or stand, or help himself in any way. Is incontinent of urine and feces. The diet consists entirely of fluids. Apparently understands nothing that is said to him and has not spoken for five or six months. During this interval has had two or three epileptiform convulsions, commencing in the right leg and spreading to the arm and face of the same side. The spinal fluid shows Wassermann 4 plus, 30 cells per cm., and excessive globulin. In the blood the Wassermann is 2 plus. On February 1, 1914, patient received treatment and made an uninterrupted recovery from the operation. On February 5 he was much brighter and made a few purposeful movements. On February 6 he recognized and talked with his wife and answered simple questions as to his physical needs by nods of the head. To date he is still bedridden and incontinent. The apraxia and dysphagia have, to a great extent, disappeared. He talks a little. He is given solid food and feeds himself. The facial expression is much brighter. He can sit up by himself and walk a little with help. On March 12 patient was again treated. On coming out of the anæsthetic the patient had a series of right-sided convulsive seizures similar to those he had had before the first operation. The seizures ceased at the end of 48 hours, leaving the patient with apraxia, aphasia and dysphagia—in short, he was in a condition similar to his status before operation. In a few days these symptoms began to clear up, and by March 29 he spoke occasionally and made purposeful movements. It was decided, nevertheless, to turn back an osteoplastic flap over the site of the second operation. This was accordingly done on April 1 and a small, organized subdural clot was found immediately under the old trephine hole. Following this, the patient improved a little more and at present he sits up, speaks occasionally and feeds himself.

CASE 2.—White; male; 45; married; laundryman; German. Admitted here January 30, 1914. Family History: Negative. Past History: Diseases of childhood, not known. Has never had any severe acute illnesses. Patient was always of a somewhat stolid disposition and had few friends. Was inclined to be irritable and sullen with his wife, but was a good provider. Married at 23. Seventeen years in this country. Both wife and son have syphilis. No history of miscarriages. Habits: Alcohol at times to excess. Venereal: Syphilis at 22. Present Illness: About May, 1913, his wife noticed a change in patient's character. From being rather sullen and stolid he became jovial and expansive, forgetful and somewhat childish in his actions. He became noticeably lacking in judgment, and upon one occasion was arrested for stealing flowers in the cemetery. He finally developed ideas of great wealth and grandeur; could no longer attend to his business and was finally committed to this hospital. Physical Examination: Showed a well-developed, well-nourished man. Complexion muddy, with some cyanosis of hands, feet and middle portion of face. Respiratory

System: Normal. Circulatory System: Normal. Digestive System: Normal. Neuromuscular System: Pupils react sluggishly to direct illumination. Consensual reflex absent on right side. Right pupil somewhat smaller than the left; no irregularity. Knee jerks much increased. No Babinski. Gait somewhat shuffling. No swaying with eyes closed. Co-ordination tests fair. Marked speech defect in ordinary conversation, and patient can't pronounce test phrases. Mental Examination: Oriented for time, place and person. His grasp of the situation and judgment are a good deal impaired. He knows this is a hospital, but thinks there are no insane people here. Says there is nothing the matter with him and seems quite indifferent to his surroundings, making no attempts to explain his presence here. Believes he can go home any time he so desires. Memory for past events is good. Memory for recent events is somewhat impaired. Patient has had a good education, apparently, but school knowledge is, to a great extent, lost. Delusions: He is quite exalted; has great wealth; can speak several languages well. Emotional Tone: He is indifferent to his surroundings, but happy and contented. Speaks of his family without emotion. He has no insight into his condition. Makes many glaring mistakes in calculating figures and displays complete indifference to them when they are brought to his notice. Conduct: He is slovenly in his dress and somewhat untidy.

On February 15, 1914, he received treatment. March 14 patient may be seen sitting about the ward, always occupied in some way. Reads the papers regularly and can quote news items of the day before. Facial expression much brighter. There is none of the indifferent, self-satisfied attitude toward his affairs. On the other hand, he discusses them interestedly and reasonably. Betrays a good deal of emotion when speaking of his family and tells, with pride, of his son's ability and ambitions. There is, however, no euphoria of grandiose ideas. He asks sensible questions about the institution. His speech defect is not so noticeable in ordinary conversation but test phrases are still poorly performed. Physical: The patient has put on weight. His complexion is better and the cyanosis is entirely cleared up. Other signs remain as before. On March 28 he again received treatment. For the last 15 cc. of the serum, slight pressure with the piston was found necessary. On coming out of the anæsthetic it was noticed that the patient was very incoherent and had great difficulty in articulation. This condition persisted for two or three days and then began gradually to clear up. On May 6 an incision was made through the old scar of the left side and a small osteoplastic flap turned back. There was no sign of any hemorrhage. Forty cc. of serum flowed in readily by gravity. At present the patient's status is as follows: He is oriented as to time, place and person and has no delusions of grandeur or wealth. Patient does not understand the nature of his disease or that it is due to syphilis. Thinks, however, that since the operation his head feels clearer and that his memory is better than before. He takes a good deal of interest in his own affairs and wants to have the details of the operation and also of the Wassermann reaction explained to him. Seems to grasp

the outstanding points of the procedure fairly well. Wants to go home, but expresses a willingness to stay here as long as we think desirable. The egotism and feeling of exaltation have given place to stolidity without depression or childishness. There is no aphasia. There is still a marked articulatory disturbance. Other signs remain as before.

February 15, 1914.—Wassermann in blood, 4 plus. Spinal fluid, Wassermann, 4 plus. Cells, 10 per cm. Globulin in excess.

May 1, 1914.—Wassermann in blood, 1 plus. Spinal fluid, Wassermann, 4 plus. Cells, not counted.

CASE 3.—Male; 35; white; laborer (U. S.); married. Admitted February 7, 1914, from Caldwell penitentiary, where he had spent one month of a three months' term, having previously been incarcerated for about two weeks in the Newark jail. The charges against him seem to have been petty thefts and intoxication. Family History: Negative. Past History: Ordinary diseases of childhood. No history of serious illness since. Moderately bright as a child. Can read and write and add figures, but his education extends no further than this. Always a good workman. No previous mental abnormalities noted. Habits: Moderately alcoholic, occasionally drunk. Of late has drank to excess. Venereal: Gonorrhea denied. Syphilis probably eight years ago. Present Illness: About one year ago patient was noticed to be irritable and faultfinding, with both grandiose and persecutory ideas. At times threatened to kill members of the family. Frequently drunk. Went away from home and lived with a woman whom he claimed as his wife, although there is no record of marriage. Came home after a while intoxicated, and stole a few small articles, for which his sister had him arrested, and he was given three months at Caldwell penitentiary. Summary of Condition at Caldwell Penitentiary: The patient was very restless in his cell and destructive, so that he had to be put in a padded cell. He managed to find a loose spot in the padding and tore it away, doing much damage to the cell. When taken to the bath room for a bath he went at once under the spray with all his clothes on. Mental Condition: The patient is very destructive and excited; uses alcohol to excess; sleeps irregularly; eats well. Said he intended to establish a printing office next week and would raise chickens and vegetables in conjunction with the business and thus make a large amount of money. Said he had never lost a position. He tore up his sheets and blankets to make handkerchiefs; claims he could make use of the pieces. Excited at first, but later laid down on a bare board with his cap for a pillow and said it was a very comfortable position. On admission here he was excited and restless, tearing his bedding and climbing up on the window guards. Talking incoherently. Physical: Shows a well developed man, very much emaciated. Complexion sallow. Expression vacant. Respiratory System: Normal. Circulatory System: Some cyanosis of extremities. No other abnormalities. Blood pressure, 120. Neuromuscular System: Eye movements normal. Pupils equal; react sluggishly to direct illumination. Do not hold well. Coarse tremor with hands extended. Coarse tremor of tongue. Knee jerks and

ankle jerks, increased. No Babinski, no Oppenheim, no clonus. Gait somewhat shuffling. Station good. Patient performs the ordinary co-ordination tests rather poorly and is unable to button his coat. Sensation: Patient is generally hypæsthetic. Does not wince when lumbar puncture is performed. Taste and smell normal. Speech low, monotonous and thick. He can't repeat test words. Cannot write his name and address. Mental Examination: Orientation; gives his name correctly. Does not know the name of this hospital, although he recognizes its general character. Gives several contradictory answers as to where he came from and why sent here. General Memory: Gives confused and contradictory answers as to his past life, members of family, etc. Is 35 years old (correct); was born in 1465; school knowledge very poor; 8 x 9 are 34. California is in New Orleans. Can't give capital of country or state. Delusions are grandiose in character, very exalted. Has \$60,000, automobiles, horses and stores. Has lots of friends. Is very good-looking and well-built. Much stronger than the average man. Can drink 50 glasses of whiskey a day. Insight: None. Is here because he has a pain over his kidneys. Is mentally sound. Is not at all affected when his numerous mistakes and shortcomings are brought to his notice. On March 6, 1914, patient received treatment. March 16: Patient is working actively about the ward. Energetic and interested in his surroundings. Facial expression is greatly improved. Complexion ruddy and healthy in appearance. Other physical signs unchanged. Patient is oriented for time, place and person. He knows how long he has been here and gives a correct account of his experiences immediately preceding his coming here. Still insists that he was married. He is somewhat exalted and slightly euphoric. Denies having any large amount of property now, but has no doubt of his ability to secure it and is full of plans for the future. He has \$6000 in the bank and he is going to start a garage, also buy out his old employer in the printing business. This printing business is worth only about \$2000, he says, and his ideas as to the garage are not exceedingly extravagant. There is a well-marked increase in cutaneous sensibility to touch and pain. March 24 patient again received treatment. April 2, 1914: Patient continues to gain physically and mentally. Delusions of grandeur entirely disappeared. Has no doubt as to his ability to take up his old work. Emotional reaction normal, and patient appears sane in every way. Remembers some of the things he said and thinks he must have been crazy to express such ideas. Gives a clear, connected account of his past life. His reaction toward his environment is normal. His judgment is good, and although his education is not such as to allow his understanding the exact nature of his illness, he realizes that he has had some mental trouble, and is willing to continue treatment.

February 28, 1914: Wassermann in blood, 4 plus. Spinal fluid, Wassermann, 4 plus. Cells, 109 per cm. Globulin in excess.

May 1, 1914: Wassermann in blood, 2 plus. Spinal fluid, Wassermann, 4 plus. Cells, 33 per cm. Globulin unchanged.

CASE 4.—Male; white; 47; married (U. S.); proofreader. Family History: Father died of apoplexy. Past History: Ordinary diseases of

childhood; no severe acute illnesses. Always of a nervous disposition. A very hard worker, always working 12 to 14 hours a day. Held a very good position as head proofreader on *Collier's Weekly*. Habits: Alcohol to excess at times, but never lost a day's work through intemperance. Venereal: Denied. Present History: He began to act peculiarly in August, 1912. Was somewhat incoherent in conversation; would leave his work and go home before the specified time. Was sent to the country to recuperate, but did not improve. Was continually depressed. Walked about the house talking to himself and muttering words about his wife. Was extremely forgetful. Had delusions of grandeur. Admitted to this hospital October 21, 1912. Physical Examination: Shows a well-developed poorly nourished man. Respiratory System: Negative. Circulatory System: Negative. Digestive System: Negative. Neuromuscular System: Pupils react sluggishly. Knee jerks markedly exaggerated. Coarse tremor of tongue and fingers. Tremor of facial muscles. No Babinski. Sways slightly with eyes closed. Co-ordination tests poorly performed. Marked speech defect in ordinary conversation. Can't pronounce test phrases. Mental Examination: Is disoriented as to time and place. Memory for past events, fair. Memory for recent events, very much disturbed. Delusions: Imagines that all his organs are weakened; thinks his bowels never move. Thinks this is a hotel and that it belongs to him; that the whole world belongs to him; thinks he has millions of dollars, thousands of elephants, tigers and lions, and a harem full of giant wives. Emotional Tone: Is extremely irritable, unapproachable and easily enraged. Noisy and abusive. Restless and continually annoying the patients. Talks almost incessantly and frequently breaks out into fits of obscene fury. Tears up his clothing and bedclothing. Smears urine and feces about the room. May 29, 1913: Patient had three convulsions. August 9, 1913: Shouting continually. Is delusional, incoherent, has exalted ideas. February 11, 1914: Is in a continuous noisy state; talks and sings all day long; is quite unapproachable; seem to have memory for recent events; thinks his mother is dead, although she visited him the day before. On March 7, 1914, patient received treatment. Patient's condition remained about the same for about a week, continually talking, shouting and singing day and night. At the end of this time he gradually began to grow quiet; slept well at night and during the day had fewer outbursts of rage. On March 27 he again received treatment. Following this operation, improvement was continuous. At the present time he has taken on a good deal of weight, his complexion is ruddy and healthy in appearance. From being practically bedridden, he is able to take daily walks about the premises. His attitude has changed decidedly. Although not decidedly friendly, he is quite approachable. He is never noisy except when purposely annoyed. He is not destructive and he is tidy about his person. The speech defect is not so noticeable. His memory for recent events is much improved. He is still disoriented and the delusions of grandeur persist.

November 10, 1913.—Wassermann in blood, 2 plus. Spinal fluid, Wassermann, 4 plus. Cells, 50 per cm. Globulin in excess.



April 14, 1914.—Wassermann in blood, minus. Spinal fluid, Wassermann, 4 plus. Cells, 3.5 per cm. Globulin in excess.

CASE 5.—Male; white; 35; married (U. S.); dentist. Admitted August 28, 1913. Family History: Negative. Past History: Ordinary diseases of childhood, no severe acute illnesses. Said to have been one of the best dentists in Newark. No mental abnormalities noted until present illness. Habits: Moderate alcohol. Venereal: Syphilis 12 or 15 years ago. Present Illness: About four years ago patient's wife began to notice a change in her husband's character. He would buy and bring into the house all kinds of unnecessary articles, especially tools and instruments of various kinds. He also went into foolish real estate ventures. Finally it became necessary to have him committed. On admission here physical examination showed a well-developed, well-nourished man. Respiratory System: Normal. Circulatory System: Normal. Digestive System: Normal. Neuromuscular System: Pupils normal and react fairly to light. Slight tremor of tongue and fingers. Knee jerks almost absent. Co-ordination tests fairly well performed. Walks straight line with some difficulty. No Romberg or Babinski. Somewhat hypoæsthetic. Marked speech defect in ordinary conversation. Test phrases cannot be pronounced. Mental Examination: Oriented as to time, place and person. Memory for past events somewhat confused. Says he is 36 years of age and has been working at dentistry for the past 22 years. Cannot do simple sums in arithmetic. Cannot answer simple geographical or historical questions. Emotional Tone: He is happy and contented; somewhat exalted. Has no insight into his condition, and shows complete indifference when his numerous glaring mistakes are pointed out to him. Has no special delusions. On March 15 patient received treatment. There has been no special change in the patient's condition since he has been in this hospital, either before or since operation.

March 1, 1914.—Wassermann in blood, 2 plus. Spinal fluid, Wassermann, 4 plus. Cells, 3.3 per cm. Globulin in excess.

CASE 6.—Male; white; 33 (U. S.); married; salesman. Admitted first, May 9, 1913. Family History: Mother and maternal aunt insane. Past History: Diseases of childhood, mumps and measles. He was bright in school; common school education, after which he went into the electrical supply business, where he proved himself a good salesman and drew good wages. Married at 20, and has four children, all alive and well except a baby, who died of measles three weeks before his coming here. Has never showed any mental abnormalities. Habits: Moderately alcoholic; never drunk. Venereal: Syphilis nine years ago. On his first commitment here he was said to have been acting in a peculiar manner for about six weeks. He was exalted, excited, with grandiose ideas; he was worth millions and had affairs of the utmost importance to attend to. Physical Examination: Showed a man in fair state of nutrition. Eyes, lateral and verticle nystagmus; right convergent strabismus. Pupils react sluggishly to direct and consensual light. Deep reflexes increased. Gait and station

good. Some tremor of fingers and tongue. No other abnormalities. The patient remained in the condition described for about three months, becoming much emaciated. At the end of this time he began gradually to improve mentally and physically, and on September 11, 1913, he was taken out against advice. He went back to his home and business and seems to have got along fairly well, although according to the statement of relatives he was not entirely normal mentally.

On March 17, 1914, he was suddenly taken with convulsive seizures, which lasted two days. He was removed to the City Hospital, where he became rapidly much deteriorated and helpless. On admission here on April 8, 1914, he presented the following picture: Patient lies in bed with dull, expressionless facies. Conjunctiva glassy; eyes vacant; sordes on teeth and lips; tongue cracked, brown-coated and dry. Decubitus on left heel about the size of a silver dollar. Complexion sallow. Fairly well nourished. Circulatory System: Heart appears normal in size and position. No murmurs. Pulse rapid, small, not well-sustained. Hands and feet somewhat cyanosed. Respiratory System: Normal. Abdomen: Normal. Neuromuscular System: Pupils equal in size; react sluggishly to direct illumination, the left more so than the right. The left pupil does not react to indirect illumination; the right only slightly. Tongue shows coarse tremor. Tremor of fingers. Knee jerks exaggerated. No Oppenheim, no Babinski. Has some difficulty in distinguishing between the dull and sharp end of pin. Cannot stand or walk alone. Could not feed or help himself in any way. Would not turn himself over in bed. Mental Examination: Patient's attention can be momentarily attracted by talking to him, and he gives his name. Is unable to give date, day, or name of hospital. Can answer no questions of any kind. On April 9 patient received treatment. Grasp: Gives date. Remembered only in a very vague way that he was at the City Hospital, and that he was brought here and operated upon. Has a confused memory of sitting in a chair and having his head shaved; of being given an anæsthetic and waking up with a bandage on his head. His recollection of this period and for several days after is very fleeting. The first event he remembers with distinctness, and from which accurate memory has continued, was being allowed to put on his clothes, which he was allowed to do on April 13. Understands in a general way the nature of his illness, and is anxious to continue treatment. Says he feels in bad shape. Patient's speech is low and rather thick, but there is no elision of syllables, and test words are fairly well repeated. Patient has since received a second treatment and has continued to improve. He is completely oriented. Memory for past and recent events, excepting his stay at the City Hospital, is good. He has no delusions of any kind. His reaction to his environment is in every way normal, and he has good insight into his condition. Physically he is much improved. He takes extended walks about the place and has put on weight. Test phrases still show speech defect, but in conversation there is none.

April 1, 1914.—Wassermann in blood, 4 plus. Spinal fluid, Wassermann, 4 plus. Cells, 80 per cm. Globulin in excess.

May 1, 1914.—Wassermann in blood, 3 plus. Spinal fluid, Wassermann, 2 plus. Cells, 4.5 per cm. Globulin unchanged.

From a clinical standpoint two cases, 3 and 6, have had complete remissions after two treatments. One has remained unchanged for two months and the other for one month.

Case 3 has had three treatments, and clinically has a remission with slight impairment of apperception and judgment.

Cases 1 and 4 have had three and two treatments respectively and have shown marked improvement, lasting in the first for three months and in the fourth for two months.

Case 5 has had one treatment and has shown no change. Two other cases have been operated upon so recently as to preclude a report on their condition at present.

The Wassermann reaction in the blood has, in all cases, been reduced in intensity and rendered negative in two cases. In only one case has it been reduced in the spinal fluid, where it was brought from 4 plus to 2 plus. The globulin reaction has remained unchanged. The cell count has been substantially reduced in all cases.

The cases treated were not specially selected but were taken at random, the patients being in all stages of the disease. The best results were obtained in those cases in which the first manifestations of the process have been noticed within a year or less, and in which the actual destruction of nerve tissue might reasonably be supposed to be comparatively slight. Conclusions as to the absolute and relative value of the treatment are as yet somewhat difficult to draw. The series of cases is still small and the period of observation short. We believe, however, that our results have been sufficiently striking to warrant further investigation along this line. We believe also, and we think special stress should be laid upon this point, that the treatment is in no sense heroic, and when properly undertaken is practically without danger. It consumes little time and is well borne by the patients in all our cases. We think it possible that an ideal treatment of general paresis may eventually be found to consist in a judicious combination of the intracranial and intraspinal methods.

## DISCUSSION.

**DR. H. W. MITCHELL.**—The papers presented this evening upon the subject of paresis well illustrate the recently developed methods of obtaining relative accuracy in diagnosis, and the line of treatment outlined arouses the hope that some cases of this disease, hitherto considered a hopelessly fatal disorder, may be arrested if not cured.

Our present knowledge of the disease may be said to have had its origin in 1857 when Esmarch and Jessen first reported cases which were supposed to have followed syphilitic infection. Then the para-syphilitic conception of Fournier was generally held until the discoveries of Schaudinn, Wassermann, Noguchi and others have furnished means to prove the syphilitic nature of the process; to give accurate diagnostic measures and, upon this basis, to formulate the rational treatment suggested by Swift and Ellis.

After reasonably prolonged observation, the older clinical methods of examination enabled observers to secure a high percentage of diagnostic accuracy, but with the general use of the Wassermann and globulin tests, cell counts, and the extremely delicate gold-chloride reaction, we can undoubtedly make earlier positive diagnosis and also differentiate the advanced cases that have not been accurately diagnosed by methods formerly available. Only by the routine use of these tests in newly admitted cases can we secure their full value in detecting early syphilitic involvement of the nervous system at a time when treatment offers the best hope of arresting the process, *i. e.*, before irreparable damage has been done.

Caution must be used in the interpretation of laboratory findings. The Wassermann serum test is occasionally negative in undoubted paretics and gives varied results at different times. In a series of repeated cell counts among untreated paretics at the Warren Hospital we found a very marked variation in the cell counts of the same patient, which could not be co-related with either clinical variations or stage of the disease. In these cases we found the globulin in reaction showing nearly as wide variation, while the Wassermann fluid test was much more constant. The observations on this series left the impression that one negative Wassermann test on blood and fluid, with negative globulin test and low cell count, did not eliminate paresis, and on the other hand, that repeated examinations would invariably yield positive results with some and, usually, all of the tests mentioned.

Anti-syphilitic treatment of paretics in the past has accomplished so little, that we turned eagerly to a trial of the method advanced by Swift-Ellis in the hope that a specific treatment may be at hand for use in cerebral syphilis. The results of this, or any treatment, must be most carefully checked by careful observation of patients for a prolonged period before we can differentiate permanent improvement or arrest of the disease, from the frequent remissions observed by all. At the Warren Hospital we have a gradually increasing number of cases under observation, some of whom have been thus treated for over a year, and a year or two

later we shall be prepared to present the facts relating to this group. Such results as we have observed to date leave serious doubt concerning the possibility of arresting advanced cases of paresis. It is a logical supposition that the earlier treatment can be instituted, following the onset of the paretic process, the greater expectation we may have of favorable results from treatment. Unfortunately months and years often elapse after onset of clinical symptoms before the paretics are committed to a hospital. Even if our efforts in such cases do not yield the desired results, they cannot fail to arouse a more general interest in the possibilities of treatment for cases of cerebro-spinal syphilis that will eventually result in a more careful observation of syphilitics and the application of best therapeutic efforts in the earliest stages of this complication. From a study of the statistics presented by Nonne, Reumont, Hjelman, Matthes and others, it would appear that some form of cerebro-spinal syphilis occurs in about 5 per cent of syphilitics. The more constant and prolonged supervision of these patients at time of infection seems to offer our most promising means of preventing the late cerebral complications.

Whether or not we materially modify the course of paresis in the advanced stages, is a matter for future determination, but I consider it most fortunate that in our medical work we can have such a definite medical problem for solution, one which cannot fail to arouse the interest of the hospital physicians and give them the satisfaction of knowing that there is work at hand which demands their best efforts. The insane hospital service has a rich opportunity for the performance of work that will not only throw light upon the treatment of late syphilis, but also for the general diffusion of concrete information concerning the relation of syphilis to mental disorder. From such continued work a better prophylaxis, in its broadest sense, may be developed that shall ultimately reduce the incidence of syphilis, and its fatal complications.

DR. SWIFT.—I disagree with Dr. Dunlap that a multiplicity of names should still persist for numerous forms of the same infection. There are already precedents in medicine where several forms of disease have been unified under one head when a single infection for them all has been found. Take tuberculosis for example. We hear of miliary tuberculosis, tubercular joints, pulmonary tuberculosis, etc., for affections known by other names before the organism was discovered. And it has been the same with other diseases. This is authority enough for doing the same thing with syphilis, now that the organism is known. I, therefore, propose for all the lesions where the organism of syphilis has been found to be etiologic, the single name *spirochætosis*.

DR. TOM A. WILLIAMS.—Both on clinical and laboratory grounds the adequacy of intravenous injections of salvarsan followed by mercury intravenously, intramuscularly or even by inunction is maintained. Of the author's cases two especially striking are reported.

A man tabetic for six years has been functionally well for two years, with a reduction of cell count from 38 to 9 after three courses of salvarsan

and mercury, totaling six intravenous injections in all. A woman who had been treated for six years for rheumatism at Clifton Springs and other places showed great loss of weight and strength, marked ataxia, almost complete loss of pain, vibration and attitude sense. She was recommended salvarsan and mercury against the opposition of several physicians. Seen only a few weeks ago this patient, although she has had only four periods of treatment of two salvarsans and from four to six weeks of mercurial injection in each, is at normal weight and perfectly well, save for the lost reflexes and a slight sensory loss in the tibial border of the feet, and can work with enjoyment again. As no arsenic is demonstrable in the serum used for intrathecal injection and arsenic is found in the serum after intravenous injection, and as no improvement has followed intrathecal injection unless intravenous injection is employed alone, it should be obvious enough that the intravenous injection is the more important procedure. The clinical facts of Sachs and the author show this. The anatomical facts should leave one to infer it; for the disease process, although a meningitis, is deep in the membrane and is generally around the vessels, which are nourished not only from the cerebrospinal fluid, but from the blood. Any benefit attributable to intrathecal injections must be due to their topical effect in causing hyperæmia. These considerations show that the method is not specific, and, in view of the numerous relapses, its superiority is doubtful.

DR. GORST.—Up to the first of October last, one of my assistants, with the aid of other members of the staff, had made the gold test in 120 cases. I speak of this especially for the reason that the general practitioner may make the gold test without having a very large laboratory and if he will, the state hospital will get the case much earlier, which should be beneficial to the patient; besides it will, perhaps, be a strong point in the way of education. With regard to syphilis in insanity, five of our cases have been treated both intravenously and intraspinally, and two have seemed to be arrested—one for nearly two years—the other three have not shown any change. We have had a number of cases under treatment, but they have not been tabulated.



## REPORT OF A CASE OF CEREBELLAR TUMOR.

By W. M. ENGLISH, M. D., C. M.,  
*Superintendent Hospital for Insane, Hamilton, Ont.*

The patient whose case I desire to present was a man 35 years of age, of English nativity; his father died at 68 as the result of an accident and his mother was living at the age of 78 years.

He was the youngest of six children, the eldest being 50 years; there was no consanguinity between the parents, or history of alcoholism, syphilis or insanity in the connection.

When 6 years of age he suffered from a severe attack of typhoid fever and was thereafter never robust, always being subject to gastric derangement and frequent attacks of vomiting.

When 14 he fell and fractured his right clavicle. On leaving school at the age of 15 years he came to Canada and took up and followed the trade of a baker for two and one-half years and subsequently drifted into a barber shop and followed this business until May, 1912, when he was compelled to give up work owing to frequent attacks of vertigo, severe pains in the basilar region extending into the fundus of the right eye and eyeball and causing disorder of sight and inability to perform his duties. A physician when consulted stated that he had right optic neuritis, probably of specific origin, and prescribed potassium iodide in full doses.

By September, 1912, he had sufficiently recovered to resume employment and took up work as collector for a railway company and pursued this with evident satisfaction to his employers—though occasionally he forgot to deliver accounts—until the time of his arrest for indecent behavior with a girl of 12 years of age whom he had invited to accompany him to a moving picture show.

A mental examination being made, he was declared insane and irresponsible for his assault and committed to the Hospital for Insane, Hamilton, Ont., on April 23, 1913, and entered under the care of Dr. John Webster, to whom my thanks are due for able assistance in preparing this report.



On admission he was evidently ill, though fairly well nourished and taking his food well and conversing freely and intelligently.

He stated that during the 12 months previous to coming under our care he was subject to dizzy spells which would come on suddenly, the blood seeming to surge to the back of his neck when he would experience severe pain there which gradually extended to his right eye and he would then become weak, especially upon his left side, and stagger if walking and he frequently had to stop on the street and support himself. This weakness would pass off in a few minutes and permit him to pursue his business, though he felt dull and stupid for two or three hours thereafter.

He also noticed that his memory had failed considerably during the previous six months. He remembered taking the little girl, with whom he was not acquainted, to the picture show but had no recollection of the pictures exhibited or any misbehavior with the child.

*Sexual History.*—In boyhood he practiced masturbation to some extent and later in life occasionally indulged in sexual intercourse, but not to excess as it caused him distress and he did not feel well after.

He denied positively that he ever suffered from syphilitic or any other sores. Occasionally he handled his lady friends indecently and in so doing he experienced the sexual orgasm; he thus handled the young child previous to his arrest.

*Physical Examination.*—Face pale and pasty, skin of trunk and limbs mottled bluish red and showing many small angiomatic spots on trunk. No suspicious scars or eruptions. Body and limbs well formed and nourished; there was a slight deformity at the site of the old fracture of the right clavicle. Heart and lungs normal. No arteriosclerosis. Dermatographie quite marked. Wassermann reaction *positive*.

*Neurological Examination.*—Pupils equal and normal in size, but responding very sluggishly to light and for accommodation—a hippic movement being quite noticeable.

The tongue was protruded straight but there was a fine tremor, the right side of the face lacked tone and the nasolabial fold was almost obliterated; the mouth was drawn slightly to the left side and he was unable to whistle.

The esthesiometer showed a marked lessening of sensibility of the right side of the face.

The dynamometer recorded 70 in each hand.

There was considerable ataxia of the left arm and leg, the finer movements of the arm and hand being uncertain.

He fumbled in buttoning his clothes and his gait was unsteady and shuffling. Knee jerks were slightly exaggerated but other tendon and the skin reflexes were normal.

Romberg's sign was present but Babinski's absent. Following one of the dizzy spells, these symptoms were all exaggerated.

*Mental Examination.*—Hallucinations and illusions were not in evidence and were denied by him.

He appeared befogged during and following his "dizzy spells" but at other times seemed quite clear and answered readily and intelligently questions asked.

*Course.*—From the time of his admission to May 30, 1913, there was little change in his condition—though he frequently remained in bed for two or three days at a time—he was anæmic and had periodical attacks of vomiting, headache and giddiness, when the facial paralysis and staggering in gait would become more marked.

Potassium iodide in doses of 45 grs. per day was given with no good effect, and as the Wassermann test of the cerebro-spinal fluid proved positive it was decided to administer a course of salvarsan.

On June 30, 1913, after a severe attack of vomiting, the initial dose of 0.6 gm. of salvarsan prepared in the following manner was administered intravenously—0.6 gm. of salvarsan was dissolved in 70 cc. of hot sterile distilled water—this was made up to 100 cc. with sterile normal saline solution and then a 15 per cent solution of Na O. H. was added until the precipitate at first formed was cleared up and then the solution was made up to 300 cc. and injected intravenously with the gravity apparatus, the time occupied in the process being 20 minutes.

The dose was given at 3.30 p. m. without any apparent discomfort; at 5 p. m. the patient vomited eight ounces of a watery fluid and, collapsing, became cyanosed and unconscious.

A pinkish watery fluid was discharged about 7 p. m. from the mouth and nostrils and continued in considerable quantity up till

death, which took place at 5.15 a. m.—*i. e.*, 13¾ hours after the administration.

*Autopsy.*—An autopsy made five hours thereafter disclosed the following:

Heart: Valves normal. Ventricles showed some dilation. Muscle of good color and on section showed no evidence of degeneration.

Lungs: Both organs were deep purple in color and mottled and extremely heavy. On removal they dripped fluid and on section the surface was deep red and dripped frothy red fluid. Mucous-like material could be squeezed from the bronchi.

Spleen: Enlarged and rather tense. On section dripped bloody fluid and is deep purple in color.

Liver: Seems somewhat enlarged and capsule felt tense. Was deep reddish purple in color and on section it showed indistinct lobulation and blood dripped from the surface.

Kidneys: Were normal in size and capsule stripped easily, leaving a deep red surface. Striation was distinct in cortex. Glomeruli stood out as red pin points.

Pancreas: Appeared somewhat injected but on section appeared normal. There was some increase in fluid in the peritoneal cavity.

Intestinal Tract: Showed no abnormalities.

Brain: On removing the skull-cap the dura protruded and seemed to be extremely tense and on incision thereof pinkish-colored fluid gushed forth. The blood vessels in the cortex were everywhere injected.

On incision of the left tentorium cerebelli a slight bulging was noticed and on removing the membrane a tumor was revealed in the occipital fossa. On removing the brain the tumor appeared to be a hard white mass somewhat ovoid in form, about 3 cm. in diameter. It was loosely attached to the cerebellar areolar tissue and shelled out easily. The only permanent attachment to the brain tissue proper was by a delicate nerve-like filament to the middle lobe of the cerebellum.

The tumor compressed deeply the left and middle cerebellar lobes, also the pons and to a slight extent the under surface of the temporo-sphenoidal lobes. The fourth ventricle showed no pres-

sure effects. Other than the results of compression, the cerebellar tissue showed nothing abnormal.

Microscopically the specimen is diagnosed as a hæmangio-endothelioma, in a disintegrating stage, that had commenced primarily in the blood vessels.

A brief review of the recent literature regarding fatalities after the administration of salvarsan shows that :

Alwkvist<sup>1</sup> in 1911 reported a case where a single injection of 0.5 gm. of salvarsan was administered and two days thereafter the patient complained of headache, slight shivering and the following morning had severe vomiting and in the evening—i. e., 70 hours after the injection—was found in bed unconscious and cyanosed; he partially recovered and then lapsed into a comatose state and died the following day.

The post mortem disclosed hemorrhagic encephalitis.

Kohrs,<sup>2</sup> in February, 1914, reported a case in which death occurred within three days after a single dose of 0.6 gr. administered following a Wassermann positive—the symptoms being those of arsenical poisoning and a post mortem verifying the diagnosis.

Speaking of the risks of salvarsan, Dr. Van Stoker<sup>3</sup> at a recent meeting held in Munich said that, basing his conclusions on experiences of 2000 cases, he believed that fatalities were due to idiosyncrasy in regard to arsenic, errors in technique, or the use of too large a primary dose, and that neither serious organic disease nor lesions of the central nervous system were contra indications.

Speaking of the amount of the primary injection, Dr. Puvis Stewart,<sup>4</sup> in a paper read before the Medical Society, London, England, April 27, 1914, when referring to cerebro-spinal syphilis, expressed the belief that it is risky to give salvarsan in the full intravenous dose of 0.6 gm., but that if given in one-half that amount and repeated at short intervals, acute arsenical symptoms would be less likely to occur.

#### REFERENCES.

1. International Med. Annual, 1912.
2. N. Y. Med. Record, pp. 5-39, March 2, 1914.
3. Br. Med. Jl., April 4, 1914, p. 778.
4. Br. Med. Jl., May 2, 1914, p. 950.

## EXPLANATION OF PLATES.

FIG. 1.—Shows tumor “in situ” and the compression of the left posterior cerebellar lobe and compression and displacement of the pons.

FIG. 2.—Makes more evident the effects of the pressure and shows the cavity left on the removal of the growth.

FIG. 3.—Shows the tumor itself and its filamentous attachment.

FIG. 4.—Illustrates under low power the presence of numerous sinuses, like blood spaces, some of which contain blood between which are fibrous trabeculae, undergoing degeneration in places.

FIG. 5.—Illustrates the condition as seen in No. 4 but under higher power.

## DISCUSSION.

DR. WM. A. WHITE.—I merely rise to make the suggestion that the condition as found at autopsy—a disintegrating tumor—is precisely the sort of lesion that might cause a release of arsenic from this organic combination. There is a possible source of danger in giving salvarsan intravenously, and this is one of the sources that has always been recognized in giving salvarsan.



FIG. 1.

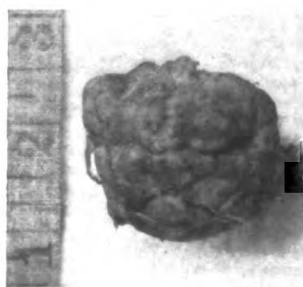


FIG. 3.

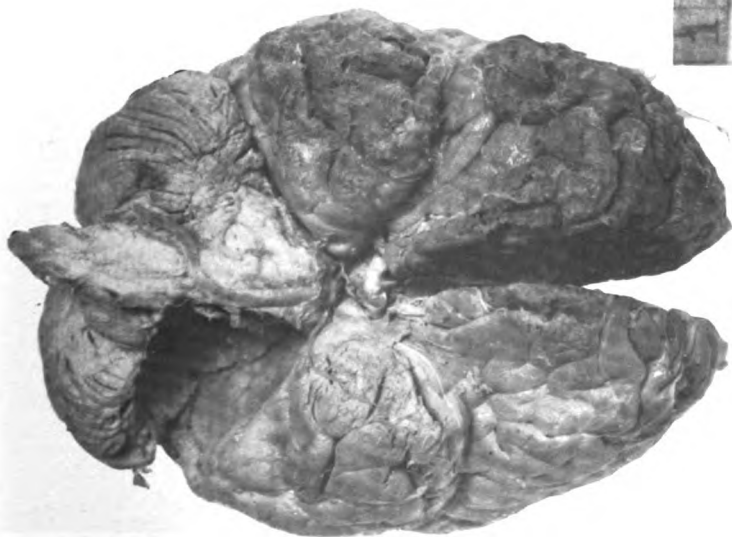


FIG. 2.





FIG. 4.

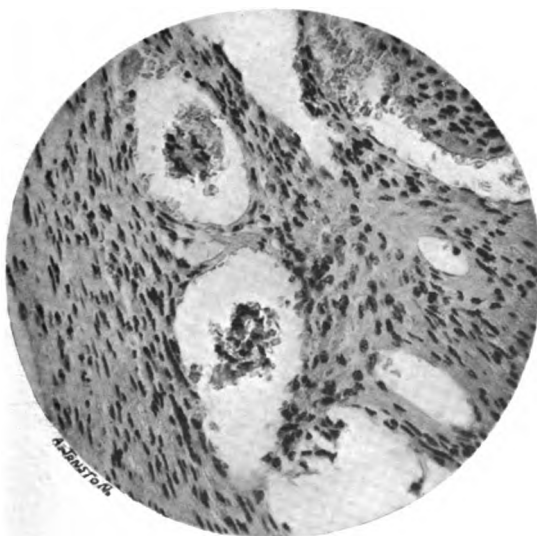


FIG. 5.





CLINICAL AND ANATOMICAL ANALYSIS OF ELEVEN  
CASES OF MENTAL DISEASE ARISING IN THE  
SECOND DECADE, WITH SPECIAL REFERENCE TO  
A CERTAIN TYPE OF CORTICAL HYPERPIGMENT-  
TATION IN MANIC-DEPRESSIVE INSANITY.

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*(From the Laboratory of the Danvers State Hospital, Number 48 of Dan-  
vers State Hospital Series.)*

This paper is the third in a series which attacks the Danvers State Hospital material by decades. It concerns itself with those cases which first showed mental symptoms in the second decade, and is intended for comparison with similar analyses of the fifth,<sup>1</sup> sixth and seventh<sup>2</sup> already published, and papers in preparation for the remaining decades.

The previous papers make an extended preface unnecessary. For our material we present abstracts of clinical histories followed by general autopsy findings, gross brain findings, and cursory notes of microscopical examination of the brain cortex with special reference to certain pigments best demonstrable by Heidenhain's iron-hematoxylin method.

Nine hundred and thirty-eight consecutive autopsies, in several of which age at onset was unknown, gave 18 cases with first attack between the ages of 11 and 20. In 5 of these brain material had not been saved and in 2 histories were lacking. Eleven cases were left for study—3 male and 8 female.

<sup>1</sup> Southard and Bond: Clinical and Anatomical Analysis of Twenty-five Cases of Mental Disease Arising in the Fifth Decade. *Am. J. Insan.*, 1914.

<sup>2</sup> Southard and Mitchell: Clinical and Anat. Analysis of Twenty-three Cases of Insanity Arising in the Sixth and Seventh Decades. *Am. J. Insan.*, Oct., 1908.

## CASE MATERIAL.

CASE 1 is that of a mulatto girl whose death followed the onset of her first mental illness in 20 days, at the age of 17.

Family history is negative. She lived on Island St. Kitts until 18 months before admission; since that time she worked hard at general housework. She had been strong and well and rather above the average in mental capacity.

Twelve days before admission she seemed to her family rather depressed and confused, but the family noticed nothing peculiar and she went back to her work for a few days. She fell fainting while at work and was sent home, where she moved about excitedly, laughed, sang, "rambled," gesticulated. Here she showed marked psychomotor activity, refused to eat food "because it was poisoned"; was good natured. She died suddenly on the eighth day.

Autopsy discovered an acute fibrinous exudate on pharynx, tonsils and tongue; acute otitis and leptomeningitis; acute congestion of lungs, liver and spleen; subcutaneous emphysema of cervical and mediastinal tissues; small aorta; brain weight 1340. (KL bacillus recovered from throat.)

Nissl, Pyronui and other stains showed "acute alteration" of the nerve cells, glial changes, infiltration by polynuclear cells, lymphocytes and a few plasma cells—all these changes most marked in the frontal region left.

There is little or no pigment in any region except the left superior frontal, where punctate small masses are found in moderate but singularly evenly distributed amounts. Almost every satellite and neuroglia cell has one or two small punctate masses, and some neuroglia cells in supragranular layers were noted, having a dozen or more granules, resembling the cells of cases much older (as examined in previous work). The question arises, whether the relatively severer acute and chronic inflammatory process which characterized this gyrus could have determined an alteration of cell metabolism such as we usually find in older cases.

CASE 2 is a girl who died nine months after entering the hospital at 17.

Her father is insane (*dementia præcox*). The patient was born in Armenia and came to America when 5 years old. She was at work in the mills; in the evenings attended night and sewing schools.

Five days before entrance she expressed fears of the Catholics, of men, of negroes and devils and said that she had lived a lie for the last five years. In the hospital she at all times refused to answer questions, but would often talk and sing to herself—what she said seemed to have little connection if any. She was restless, her movements quick and tending to stereotypy; at the end of a month she had many mannerisms, was resistive, showed *cerea flexibilitas* and a little negativism. Her mood showed apparently neither depression nor elation. She was tube-fed. In six months tuberculosis developed, of which she died.

Autopsy showed merely an extensive tubercular process in the left lung. Brain weight, 1270.

This case is to be published more fully elsewhere with a description of microscopic findings; from the standpoint of this research, the Heidenhain staining pigments are absent or negligible in all areas so far studied.

CASE 3 is that of a married woman whose first attack occurred at 17, second at 31, third at 32, and who came to this hospital at 49 to die six weeks later.

Father, mother and three brothers are living and well; an aunt is insane. A strong child, developing normally and doing well at school. At 17, in private (high) school she studied hard and became depressed, weak, kept quiet and had no active interest. At 31, and after an unhappy marriage at 32, she had similar attacks. In no attack did delusions appear. She made perfect recoveries. At 49 she came to this hospital in a typical manic attack which had lasted five months. She died of enterocolitis.

Autopsy showed unequal pupils, dilated stomach, chronic pleuritis and endocarditis, infarst of spleen, chronic hepatitis and sclerosis of the aorta, with acute pyelonephritis and enteritis.

The dura was thickened and adherent, the right ascending parietal artery enlarged and thrombosed. There was a softened hemorrhagic area 1 cm. in diameter, well defined, in right postcentral lobule, 2 cm. from superior surface. Brain weight, 1210.

Heidenhain preparations showed much pigment in the pyramidal cells everywhere, varying most in amount in the frontal region; much glial pigment in all regions except frontal, where it was moderate; much pigment in the perivascular spaces of calcarine and precentral regions, with little or none in temporal and frontal.

CASE 4 is that of a single woman whose first mental trouble was at 19, who came to the hospital at 20 and at 22, dying at 25 after an interrupted residence.

An uncle had post-paralytic insanity; an uncle had epilepsy; grandmother paralytic; father alcoholic. "Patient had ordinary mental capacity to 19." She finished a common school course and worked in a factory for \$7 a week.

She attempted suicide at 19 and at the Westboro State Hospital was found to be depressed and discharged recovered after several months. For several months at home she seemed well, then had a month's depression, after which she became very active and immoral. She was brought to this hospital, was at first only active and cheerful, but then went through a noisy, singing excitement, seeming almost well for a time, then growing depressed, then noisily excited, and then normal when she was discharged. An enlarged heart was noted on her entrance here. At home she got on well part of the time, but had spells of irritability and discouragement, and several times went off in the company of men. In a year she was returned to the hospital in a mild depression and after showing gradual improvement for a year was allowed to go out on visit. For a week she got on well and then resumed her immoral ways, being returned to the hospital two months later in a hyper-active condition, silly. Tuberculous infection of the lung soon appeared, and in a year she died; during this time she

showed several attacks of excitement lasting for a day or two, and a few depressed spells.

Autopsy showed tuberculosis of the lungs with cavitation and bronchiectasis, tuberculosis of intestines, lymphnodes, miliary tubercles of liver and kidneys, amyloid reaction of spleen and liver, serous pericarditis and peritonitis, emaciation, decubitus, aortic sclerosis, chronic fibrous endo- and myocarditis, slight coronary sclerosis.

The brain weighed 1310 g. Dura slightly adherent, with pia slightly milky over parietal sulci. The frontal convolutions on the left are smaller and more numerous than on the right. Slight pial thickening over cord.

The microscope shows fewer cells in the small pyramid layer of left superior frontal gyrus than of right. The left occipital region seems poorer in cells in outer layers than the right. Superficial gliosis in many regions (see Neurochemical Series, 1906-7) and some satellitosis. Under Heidenhain a very slight pigmentation of nerve cells and glia without local variation.

CASE 5 is that of a single woman whose first mental symptoms were noticed with the onset of convulsions at 13, who entered the hospital at 55 to die four years later.

There is a negative family history. The patient was well and bright as a girl; she was making good progress when her school work was interrupted by fits at 13. All that is known of her ensuing history is that the convulsions increased in number and severity along with a gradual dementia. Here she showed severe dementia-animal-like behavior and athetoid movements of the arms and hands. Ten days before her death the right hand was infected.

Autopsy showed a tuberculosis of the left apex, chronic interstitial nephritis, sclerosis of the aorta and coronaries, unequal pupils. Streptococci were grown from the incised wound of the hand.

The brain weight was 1010 g. The dura was adherent over small areas in each frontal region; it was of normal thickness.

A moderate amount of subpial edema. The right half of the brain appeared slightly larger than the left. To the touch the motor areas gave the most resistance. The cornua ammonis were smaller than usual; the ventricle walls finely sanded.

Microscopically the glial cells were very much increased, with marked satellitosis. Under the Heidenhain stain the pigment was large in amount and evenly distributed over glia, nerve cells and perivascular spaces.

CASE 6.—A single woman, whose first mental symptoms appeared at 20, who entered the hospital at 23 and died six years later.

Family history negative. The patient was born in Newfoundland. She developed normally.

At 20 she began to be careless, at 22 had severe headaches with flushing of the face, and at 23, just before her entrance, she developed delusions about a man who she thought was following her. Here she was well oriented, showed considerable dulling of the finer sensibilities with loss of

affect, possible auditory hallucinations, cheerful and nonchalant manner, refused to occupy herself. In a year many mannerisms appeared, in three years outbursts of violent excitement. After four years an epithelioma of the tongue was found; two years later she died with symptoms of pneumothorax. She was apathetic but never lost her orientation.

Autopsy showed emaciation, pulmonary tuberculosis, empyema, chronic pleuritis, chronic lymphnoditis, chronic peritonitis, myo- and endocarditis, acute and chronic nephritis, cystic tube (right), epithelioma of tongue and sub-lingual glands, cancerous growth of pituitary.

The brain weight was 1165 g. The dura was slightly thickened and adherent to the calvarium; the pia was thickened over the vertex. There was a large amount of subpial edema. The convolutions were symmetrical and firm.

With the Heidenhain stain pigment was found in extremely slight amounts in the glia and perivascular spaces of the right precentral lobe and was not found elsewhere.

CASE 7 is that of an unmarried girl who came to this hospital in two attacks, one at 17 (or 14), the other at 31 (or 28), and who died three weeks after her last admission.

The paternal grandmother was insane, and the father and mother were both of very peculiar makeup. Home life was unhappy. A social, mild, capable girl. She worked in factories and in housework.

At 17 she felt very happy, restless, thought she was going to get married, was stage struck; throughout there seemed to be some indifference. This mood changed to a condition where she seemed depressed, indifferent, inactive. Both phases together lasted eight weeks. Her cervix and uterus appeared unusually large. She was well for 14 years. At 31, two months before admission, she became restless, laughed and talked incessantly at times, at other times cried, thought people were trying to injure her and that the food was poisoned. At the beginning of this attack her father and mother had separated. On second admission there was irregularity of heart action and a thrill was noticed over apex; tremor of arms and pectoral muscles. She talked dramatically, apparently uninfluenced by what went on about her; at times flight is noticed, but often the connection between sentences is not apparent. "I am a widow instead of an old maid. They poisoned all but my insides and they can never poison that." Whether she was oriented could not be determined. Hallucinations are probable. After tube feeding she died of lobar pneumonia.

Beside the pneumonia, right, the autopsy disclosed malnutrition, chronic atrophic dermatitis, chronic adhesions about gall bladder and appendix, right hydrosalpinx, chronic gastritis, acute colitis, dilatation of thoracic aorta.

The brain weight was 1300 g. The dura is not adherent. In a wedge shaped area including both first frontal convolutions, apex pointing back to the central fissure, there is considerable anemia in contrast to the rest of the brain. Section into the ventricles shows barely palpable granulations over the optic thalami.

"Microscopically the Nissl sections would serve to give an example of normal cortex. The right frontal region shows slight superficial glioses, and the white matter of both frontal regions shows excess of neuroglia nuclei. About a vessel in cerebellum is a cell collection suggesting chronic exudate. The cervical regions of the cord suggest posterior column gliosis."

In the precentral region there was considerable pigment in the nerve cells, a less and more variable amount in the glia and perivascular spaces. In the frontal region the pigment was very slight and in the calcarine areas negligible.

CASE 8, a single woman, had a first attack of mental trouble at 15 or 16, received hospital treatment first at 20 to 23, was taken home and first brought to the Danvers State Hospital at 26, where she remained 19 years till her death.

Family history is negative. The patient was bright and was well educated. At 15 came a poorly described "attack which left her demented to some extent." At 20 apparently she was worse, and then for some years was "fairly reasonable." Then she began to have periods of depression and excitability, and several times attempted suicide. Menstruation was at times suppressed, at times painful. Brought here at 26; at first she seemed to enjoy it, then tried to escape and made a feeble attempt at suicide; became capricious, suddenly dropping her work or topic of conversation to switch off upon something else. Masturbation was noticed. At 30 she was boarded out for two months, being returned because of her restlessness. At 34 she was apathetic; at 41 her conversation loose and her voice unmodulated; at 43 tuberculosis was suspected; she showed negativism. Without much further change she remained to her death at 45.

The cause of death was pulmonary tuberculosis. The autopsy showed, in addition, emaciation, sclerosis of internal mammaries and aorta, hemorrhagic endocarditis, fatty liver, chronic cholecystitis, cholelithiasis, chronic parenchymatous nephritis, uterine fibroid, hemorrhage and ulceration of stomach and intestine.

The brain weight was 1385 g. The dura was not thickened and the pia showed only a slight clouding over vessels. The convolutions were well rounded and of normal consistency. The basal vessels were free of sclerosis.

The pigment was negligible, being found only in an occasional satellite cell.

CASE 9 is that of a single man<sup>\*</sup> whose first attack came at 12, who was admitted to this hospital at 19 and remained until his death at 32.

The paternal grandfather was intemperate. The patient possessed ordinary mental capacity and did well at school.

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<sup>\*</sup> This case has been published as Case XIV by Southard in his study of dementia præcox, 1910.

At 12 he had a two weeks' attack of confusion and more or less unconsciousness. For some years after he would at times complain of a pain in his back or head. At 18 he was observed to have laughing spells, which would perhaps lead to boisterous outbreaks; he thought that someone was mesmerizing him. Then followed spells of elation and depression, insomnia, threats of violence and suicide. On admission he was quiet and expressed most fantastic and absurd scientific theories. "The moon is the blind eye of some animal." "I have the shoulders of an Egyptian, the head of Napoleon or an Italian and my limbs are French." "We are all being continually acted upon by minerals . . . and magnetism."

The pigment under Heidenhain was negligible.

CASE 10 is that of a single man whose age at the onset of the first mental symptoms was 17, and who came to this hospital at 19 and at 22, dying 7 weeks after his second admission.

Family history seems good. The patient was born in Canada, learned to read but not to write, was a good boy, made no trouble, had to go to work in the mill at 12. He worked steadily for five years.

At 17 he gave up work, and lay about the house smoking excessively. At 18 he had weak spells, which were explained by a doctor as due to tobacco heart. Until a month before entrance he was extremely dull, sleepy and inactive; since that time he has been excitable, violent, claiming that his mother was the devil. Admitted at 19, he showed a striking reaction to physical examination, twisting, turning, and suddenly allowing himself to be lifted as a dead weight, or stiffening and falling. No relevant answers could be obtained; there was much apparently disjointed production. For the next 14 months he was generally mute and resistive, but occasionally obeyed commands in an automatic manner. Transferred to another hospital, he was taken home after a month, where for a year he sat about and did nothing, during the next year having spells of a mild, peculiar excitement. Again committed to this hospital, at 22, his most prominent symptoms were untidiness and apathy; after seven weeks he died of dysentery.

Autopsy showed irregular pupils, apical scar, a limited aspiration pneumonia, injection of the mucosa of the gastro-intestinal tract with areas of denudation, acute nephritis, contracted bladder, enlarged mesenteric lymph-nodes, perforated drums in middle ears.

The brain weighed 1335 g. Somewhat soft at occipital poles. Slight pigmentation of cerebrum; none of cerebellum. Pia and dura were thickened.

Microscopical examination showed a considerable round cell infiltration. Everywhere there occurred a very slight but fairly regular nerve-cell pigmentation, with only occasional traces of pigment in glia or perivascular spaces.

CASE 11 is that of a married man whose mental illness began at 18 or 20 and who came to this hospital at 58. After seven more admissions he died here at the age of 68.



Family history is negative. He was a cheerful, temperate man. There was a history of frequent attacks of depression from the age of 18 or 20. At 58 he was admitted in a depression from which he recovered in three weeks. At 59 he stayed five weeks in another depression, recovery being coincident with a follicular tonsillitis. In the same year came another depression of two months; at this admission his heart was noticed to be enlarged. At 60 a depression lasted three months. At 62 he was manic one month, depressed one week, and then became normal. At 65 he returned incoherent and euphoric for four days, and then for three years to his death depressed, confused and elated episodes followed each other.

At autopsy was found contracted kidneys, cardiac hypertrophy and dilatation with general edema. The coronary arteries were atheromatous. Lobar pneumonia and a hemorrhagic infarct of the lung were found.

The dura was adherent and the basal arteries moderately atheromatous. Brain weight, 1290.

Under the Heidenhain stain there was much pigment in the nerve cells, less in the glia and least in the perivascular cells.

### CLINICAL SUMMARY.

#### SEX.

We are dealing with a group of eight women and three men.

#### HEREDITARY FACTORS.

In six cases insanity in the family is denied; in five cases it appears; in three cases it is prominent; in Case 7 the father and mother were peculiar and the paternal grandmother insane; in Case 4 the father was alcoholic, an uncle epileptic, an uncle insane, a grandmother paralytic; in Case 2 the father was insane. In Case 3 an aunt was insane and in Case 9 the paternal grandfather alcoholic.

#### ANTECEDENT FACTORS.

No antecedent factors appear which can reasonably be considered causal. The first three cases worked hard, and cases 3 and 7 had unhappy home lives.

Hallucinations of any sort are doubtful; auditory ones are probably present in cases 7 and 6.

One case (3) showed no delusions; in another case (10) they were doubtfully expressed. The only case showing either delusions of influence or of somatic character was 9. Delusions of persecution characterized 4 cases (1, 2, 6, 7).

## GENERAL CLINICAL FEATURES.

Case 1 showed confusion. Six cases (1, 3, 4, 7, 8, 11) at times showed depression, and five (1, 3, 4, 7, 11) at times showed exhilaration. Four showed apathy (6, 7, 8, 10). Four showed excitements (4, 6, 8, 10); negativism appeared in cases 2 and 6. Case 5 had convulsions and athetosis. Cases 9 and 10 were catatonic.

Headache and vaso-motor disturbances characterized onset in Case 6. Menstrual disorders were noted in two women (7, 8), loose sexual habits in one (4), and self-abuse in another (8). Extreme weakness at onset is noted in one case (3). Cancer developed in one case (6); heart disease in cases 4, 7, 11; body pain in Case 9.

The general courses of the cases, and probable diagnoses, are summarized in the following table.

TABLE I.

Case.	Sex.	Age at			Duration of		Diagnoses.
		Onset.	Subsequent Attacks.	Death.	Attacks.	Life.	
1	F.	17	—	17	20 d.	20 d.	Manic-depressive psychosis?
2	F.	17	—	17	9 m.	9 m.	Dementia præcox.
3	F.	17	31, 32	49	2 y.?	32 y.	Manic-depressive.
4	F.	19	Many attacks.	25	3 y.?	6 y.	Manic-depressive.
5	F.	13	Gradual dementia.	59	Many.	46 y.	Epileptic dementia.
6	F.	20	—	29	9 y.	9 y.	Dementia præcox.
7	F.	17	31	31	5 m.	14 y.	Manic-depressive.
8	F.	15	Many exacerbations.	45	30 y.	30 y.	Dementia præcox.
9	M.	12	18	32	15 y.?	20 y.	Dementia præcox.
10	M.	17	—	22	5 y.	5 y.	Dementia præcox.
11	M.	18	Many attacks.	68	20 y.?	50 y.	Manic-depressive.

## ANATOMICAL ANALYSIS.

Six of these cases showed severe tubercular lesions (4, 5, 6, 8, 9, 2) and five were emaciated at death (4, 6, 7, 8, 9). Atheroma was found in five instances; coronary alone in case 11; aorta alone in case 3; aorta and coronary in cases 5 and 4 (age 25); aorta and internal mammaries in case 8. Cardiac hypertrophy was found in

case 11; endocarditis acute in 8 and chronic in 6, 4 and 3; myocarditis in 6 and 4. Acute nephritis in 3, 6, 9, 10; chronic in 4, 6, 8, 11. Lesions of the gastro-intestinal tract are recorded in six instances; of the liver in two; of spleen in one; chronic peritonitis in three. Skin lesions appeared in cases 9 and 7. The first case had acute otitis media and the tenth perforation of the drum. A uterine fibroid was found in case 8, and hydrosalpinx in cases 6 and 7. Diphtheria was the cause of death in case 1, and pneumonia in case 11, pyothorax appeared in case 6 and hydrothorax in 9. The first case had a small aorta.

Brain weights with age at death are arranged in the following table:

TABLE II.

Brain Wt.	Age at Death.	Sex.	Case Number.
1010	59	F.	5
1110	32	M.	9
1165	29	F.	6
1210	49	F.	3
1270	17	F.	2
1290	68	M.	11
1300	31	F.	7
1310	25	F.	4
1335	22	M.	10
1340	17	F.	1
1385	45	F.	8

Inflammation of the meninges we find in nine cases; of the dura in cases 3, 4, 6, 10, 11; of the pia in cases 1, 4, 5, 6, 8, 9, 10. In case 3 there was a chronic inflammatory exudate near the vessels of the frontal region. The only instance of basal atheroma occurred in case 11, 68 years old. Cases 5 and 7 showed granular ependymitis locally. Precentral gliosis was noted in case 5, and postcentral softening in case 3; increase of pigment (gross) in 10; local anemia in 7; variation in convolutions of the two sides in 4 and 5; enlargement and thrombosis of the right ascending parietal artery in case 3, aged 49.

The cord in case 10 was small, to correspond with the small brain.

The distribution and amount of pigment was shown in the two following tables, the first arranged according to duration of life

after onset, and the second according to the age at death. We have represented no pigment by o, slight by +, moderate by ++, marked by +++, and an extreme amount by +++++.

TABLE III.  
PIGMENT DISTRIBUTION AND DURATION OF LIFE AFTER ONSET.

Case.	Duration Life After Onset.	Perivascular Cells.	Glia Cells.	Nerve Cells.
11	50 y.	+	++	+++
5	46 y.	+++	+++	+++
3	32 y.	+++	+++	+++
8	30 y.	o	o	o
9	20 y.	o	o	o
7	14 y.	o to ++	o to +	o to ++
6	9 y.	o	o	o
4	6 y.	+	+	+
10	5 y.	o to +	o to +	+
2	9 m.	o	o	o
1	20 d.	o	o	o

Case 1. More pigment in left superior frontal. Inflammation.

Case 3. Frontal pigment least.

Case 6. Precentral has slight pigment in glia and perivascular spaces.

Case 7. Precentral has moderate but variable pigment in pyramids and perivascular spaces.

TABLE IV.  
PIGMENT DISTRIBUTION AND AGE AT DEATH.

Case.	Age at Death.	Perivascular Cells.	Glia Cells.	Nerve Cells.
11	68	+	++	+++
5	59	+++	+++	+++
3	49	+++	+++	+++
8	45	o	o	o
9	32	o	o	o
7	31	o to ++	o to +	o to ++
6	29	o	o	o
4	25	+	+	+
10	22	o to +	o to +	+
2	17	o	o	o
1	17	o	o	o

### CONCLUSIONS.

1. This work is another instalment of work designed to throw light on the age-factor in the production of mental disease, and has the same features of random selection, employing only autopsied

cases, from a long series, as did previous work from the Danvers State Hospital laboratory on cases having onset in the sixth and seventh decades (1908) and in the fifth decade (1913).

2. There turned out to be surprisingly few cases for the analysis; somewhat less than 2 per cent of a long series of autopsied cases (18 in 938) proved to be cases having onset of mental disease between 10 and 20 years.

3. The age-distribution in the 11 cases which proved suitable for full clinical and anatomical correlations is striking; of these 11, 8 had onset between 17 and 20 years, and 5 (of these 8) at 17; the age-distribution, so far as it goes, suggests disorder at puberty as somehow related with the onset of the first attack.

4. Omitting one female epileptic which demented, we find the cases equally distributed between manic-depressive insanity and dementia præcox. The manic-depressive five were composed of 4 females (1 of rather doubtful diagnosis) and 1 male. The dementia præcox five were composed of 3 females and 2 males. Four of the five dementia præcox cases were subject to tuberculosis; one of the manic-depressives was tuberculous.

5. The lipid disorder, of which we attempted to get an index by a study of the distribution of certain substances stainable by the Heidenhain iron-hematoxylin method, was far more in evidence in the manic-depressive series than in the dementia præcox series.

6. The three cases with most marked pigmentation (in this specialized sense) were: (a) the epileptic dement above mentioned, onset at 13, attacks till death at 59; (b) a manic-depressive, depressed at 17, 31 and 32, maniacal at 49, dead of intercurrent disease at 49; and (c) a manic-depressive, very numerous attacks of depression, first at 18-20, 7 known attacks between 58 and death at 68. Other three manic-depressive cases showed marked (although less marked) pigmentation focally in (d) the doubtful case above mentioned (in which indeed the pigment is rather an index of local metabolic disorder in an inflamed convolution) and (e, f) cases dying at 25 and 31 respectively.

7. The dementia præcox cases either showed no pigment as in (g) death at 17 after 9 months symptoms, (h) death at 45 after 30 years of symptoms, (i) death at 32, 20 years after onset, or a slight amount, as in (j) death at 29 after 9 years of symptoms,

and (k) death at 22 after 5 years of symptoms (pigment in occasional pyramids).

8. If these findings should be taken at their face value, it might be inferred that manic-depressive insanity is more likely to prove a disease involving brain-cell metabolism than is dementia præcox. In dementia præcox there is more evidence that certain cells have been destroyed outright; but cells which escape destruction are not likely to look in any respect abnormal. In manic-depressive insanity there is not such good evidence of cell-destruction; on the other hand, these cases seem to show that overloading with a certain kind of pigment is more characteristic of the brain-cells of manic-depressives than of precocious dement.

9. The manic-depressive cases of this series seem to have shown more depression than mania; what the relation of this may be to the histology of these cases is doubtful; but it would seem desirable to examine cases of long-continued mania and long-continued depression with the same technique.

10. Previous work from this laboratory on age-correlations with pigment-deposits has suggested that especially the neuroglia cells are likely to show progressively more and more pigment with advancing age; the present work, regardless of the special entity correlations just discussed, seems to show that youthful cases do not show much neuroglia-cell pigment, and therefore this work is to that extent consistent with former results.

11. As to the possible causes of the pigment deposits in various types of cell, perhaps nothing better than the mystic term "metabolic" can be risked. Still, there are two cases in which they were decidedly local accumulations of somewhat similar-looking substances due to or closely associated with acute inflammatory processes (see cases 1 and 10, dying at 17 and 22 years respectively). In these cases, to a large extent entirely free from pigmentation, either the pressure or the toxins of the inflammation had produced the same appearances *focally* that are shown by other non-inflammatory cases *diffusely*. The deposits are, then, possibly favored by certain factors working *ab extra* with respect to the cells in question.



# ANATOMICAL FINDINGS IN THE BRAINS OF MANIC-DEPRESSIVE SUBJECTS.\*

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## ABSTRACT.

### I. *Introductory.*

Object of this work, to control the writer's dementia præcox work (1910).

Symptomatological value of mild localized lesions.

Microlocalization and macrolocalization.

Brain consistences specially studied.

Gliosid and brain consistence.

Manic depressive insanity and dementia præcox.

Prognosis and diagnosis.

Autopsy findings uncertain in manic-depressive insanity (Kraepelin).

Thalbitzer's suggestion.

Significance of focal scleroses in silent brain areas.

Paucity of brain material "normal" in all ways in manic-depressive insanity.

Disintegration products in brains of catatonic excitement (Alzheimer).

The distribution of these should be studied.

Orton's results in a study of satellitosis in manic-depressive insanity and other diseases.

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## II. *Analysis of Case-Groups, with Special Reference to Excluded Cases.*

Cases with focal lesions (anomalies, scleroses, atrophies) especially interesting in relation to dementia præcox.

49 cases in the original random group.

6 cases of involution-melancholia, excluded from prior consideration.

4 cases excluded as containing focal arteriosclerotic lesions, rendering analysis of other focal lesions difficult.

1 case excluded as frank error of diagnosis.

11 of remaining 38 (29 per cent) show lesions recalling those of dementia præcox; but of these 11, 3 seem (*post facto*) actually to have been cases of dementia præcox.

2 others are of very doubtful diagnosis and 2 more somewhat doubtful, leaving 4 focal-lesion cases in 31 cases of manic-depressive psychosis.

13 per cent focal lesions (anomalies, scleroses, atrophies) in manic-depressive psychoses may be pitted against 86 per cent such arrived at by a similar analysis of dementia-præcox material.

## III. *Analysis of Case Material, with Special Reference to Cases Showing Anomalies, Sclerosis and Atrophies.*

Involution-melancholia excluded (6 in 49).

16 cases in 43 show gross lesions (4 of these arteriosclerotic lesions, leaving too complicated a picture for first analysis).

3 in the focal (*non-arteriosclerotic*) list of 12 should be considered cases of dementia præcox (analyses given).

2 others probably best excluded as involution-melancholia and dementia præcox respectively (analyses given).

## IV. *Notes from the Literature on "Organic" Cases of Manic-Depressive Psychoses.*

Pilcz on periodic psychoses: emphasis on arteriosclerotic cases (excluded from the present analysis).

Pilcz' hypothesis (1901) of faulty construction of nervous system not upheld by F. Hoppe, 1908.

Other cases.

The literature points to the great importance of heredity, and brings up questions as to the relation of arteriosclerosis and dementia.

## V. *Special Questions.*

Tabulation of data.

Example of a non-hereditary case (data not above reproach).

Is not manic-depressive insanity essentially hereditary, in the sense that near relatives invariably show signs of insanity?

This result probable, if involution melancholia, focal-lesion cases, and decidedly atypical cases be excluded.

Dementia in manic-depressive insanity not yet proved to be due to arteriosclerosis.

## VI. *Conclusions.*

## I. INTRODUCTORY.

The first purpose of the present study was to effect a proper control of the writer's brain findings in dementia præcox (1910).<sup>1</sup> The intrinsic interest of findings in manic-depressive insanity, whether positive or negative, has prompted a more elaborate study than at first contemplated, and a photographic anatomical study is in preparation, following the lines of the writer's later study of dementia præcox (1914).<sup>2</sup>

By and large, the study of brain *anatomy* in the insane, as distinguished from *cortex histology*, has been much neglected of late years. While studying microscopic findings more or less intensively in these cases, I have relegated histology to the background so far as possible, both in the dementia præcox work already published and in the present work on manic-depressive insanity; and I have sought to emphasize the *possible symptomatological value of mild localized cortex lesions* in a manner which will recall the methods of Hughlings Jackson and Theodor Meynert, rather than the more modern intentions of exactness displayed in several works.

Meantime, I recognize that the task of future psychopathology will be tremendously cleared up by feats of *microlocalization* in the cortex, beside which the present efforts look small. What I seek is a rough orientation in this field, a kind of coarse *macrolocalization*, which is an indispensable preliminary to more finished work.

The suitability of my material for this study is enhanced by the fact that I had been for some time carrying on investigations of *soft brains or brains with soft spots* from a bacteriological point of view,<sup>3,4</sup> and other investigations of *hard brains or brains with hard spots*, more particularly in connection with the study of gliosis in epilepsy. The consequence was that my protocols and those of my colleagues were filled with data concerning topical variations in brain consistence, coupled with observations on visible atrophies, macrogyrias, or microgyrias, in a large group of cases. I am convinced that future brain anatomists should carefully consider these *tactile data* in addition to the classical data afforded by the eye. Weigert used to insist in his laboratory that the neuroglia method would yield neurological results often superior to those afforded by the myeline-sheath

method. It seems to me that palpation of brains, revealing varieties of consistence due to differences in the framework of the tissues, is the natural preliminary of such neuroglia studies and teaches us *where* to spend our best microscopic effort.

To the practical psychiatrist, manic-depressive insanity and dementia præcox are sister affections. Not merely is our knowledge of both diseases largely the product of Kraepelin's synthetic insight, but also in psychiatric practice these two affections, theoretically distinct, produce between them a perfect mare's-nest of diagnostic difficulty.

Practically, the alienist is much concerned over this distinction because the prognosis is often assumed to hang upon the diagnosis, and because it is well known that the direction and intensity of our treatment hang very much upon prognosis. There is no doubt that many less strict diagnosticians, in America at least, proceed on the practical basis that manic-depressives may get well, but primary demented do not. Everyone knows somewhat successful practitioners who make up a prognosis in some cryptic, not to say feline, manner, and then proceed to label the case "M. D." or "D. P." according to the supposed favorable or unfavorable outcome. We are all acquainted, too, with eager psychiatric critics, who triumphantly demonstrate, months after some ardent staff controversy, that such a case was not "M. D." because it deteriorated, or was not "D. P." because it recovered. I need scarcely recall that Kraepelin himself lays down no such hard-and-fast lines of prognosis.

With respect to autopsy findings, Kraepelin himself dismisses the subject (1904) with these words (after the section on maniacal conditions): "*Von irgend gesicherten Leichenbefunden ist noch nichts zu berichten.*"\* The same sentence stands in the 1913 edition.<sup>1</sup>

Thalbitzer has put forward claims for lesions in Helweg's triangle in the spinal cord in this disease.<sup>2</sup> A superficial review of available Danvers material by R. L. Van Wart of New Orleans, Louisiana, failed to show more alterations in available manic-depressive cases than in other conditions. A careful study of this region in many conditions is demanded; it is doubtful whether light will be thrown on manic-depressive insanity thereby.

The somewhat surprising results of a recent analysis of our Danvers cases of dementia præcox, viz., 86 per cent of the cases demonstrating macroscopic or microscopic lesions, often of a suggestively focal character, gave point to a re-investigation of manic-depressive material from the same source. The presence or absence of similar lesions, studied especially from the topographic point of view, would obviously offer one of the best possible controls for the dementia præcox work.

The presence of focal atrophies, aplasias, or scleroses in silent areas of the brain, *without appropriate symptoms or without any symptoms*, as I point out more fully elsewhere, would lead us to the old Meynert conception of "functionally unoccupied" areas, not yet filled or otherwise utilized by experience. This conception of Meynert's has been largely replaced to-day by the notion that these so-called silent areas really have a message for the right receiver. The pathologist feels bound to explain, as best he may, in some functional terms any "brain spots" he may discover. The "normal" brains of the general hospitals, prone as they are to show now and then massive cut-outs, such as cysts of softening, fail to show, as I shall shortly bring out by a detailed analysis now in preparation, the kind of thing I have described for dementia præcox.

But grant, for the moment, that such things as normal brains exist and come to autopsy, how stand manic-depressive brains? Do they stand with the normal brains or with the dementia-præcox brains?

A word concerning the intimate nature of the lesions in question: At the first symposium of the New England Society of Psychiatry dealing with manic-depressive insanity, I reported the surprising paucity of brain material "normal" *in all ways* in the series then available. Only one of 37 brains seemed normal in all macroscopic and microscopic respects. One critic jumped to the conclusion that the abnormalities discovered, various as they were, running all the way from sculptural anomalies to general cytopathological changes, were assumed by me to be correlated with the disease. Such was, of course, not my intention, but merely to indicate how difficult is this region of analysis. Evidence of actual destruction of brain tissue, eventuating as a rule in macroscopically recognizable lesions, is the species of

evidence of the greatest value at this juncture. I am far from discounting the scientific value of cytopathological changes *per se* or denying possible importance of, *e. g.*, neurofibrillar changes.

You are all aware, also, of the bold claim, recently made by Alzheimer,<sup>9</sup> that cases of catatonic excitement can be told from cases of maniacal excitement on the score of certain disintegration products present in and between the cells of the catatonic brain. Similar disintegration products, Alzheimer states, may be found in the brains of cases showing severe visceral disease. Here lodges a tremendous difficulty; for precisely manic-depressive patients, dying in attacks, are often subject to severe visceral, apparently non-nervous, disease. To resolve that difficulty will require, I believe, the most careful inquiry into the *distribution* of these products, as well as of other cytopathological changes, in the different brain-parts, and much keen clinical correlation.

It is true, too, that even such comparatively unequivocal evidence of nerve-cell injury as the development of satellitosis is often made to bear too heavy a burden of explanation. It was a very salutary thing that, at the second symposium of the New England Society of Psychiatry on manic-depressive insanity, S. T. Orton, of Worcester State Hospital, Mass., showed much evidence of satellitosis in manic-depressive material. Here, again, the important question, from the entity's standpoint, is the constancy, degree, and habitual regions of these destructive changes.

An abstract of Orton's conclusions,<sup>10</sup> based on his entirely independent data, studied without reference to my own work, is as follows:

#### ORTON'S WORK ON SATELLITOSIS IN THE PSYCHOSES.

The analysis of the relative numerical occurrence of satellite cells in 10 cases in each of five psychoses seems to warrant the conclusion that satellitosis cannot be considered in any sense indicative of the type of psychoses, although it has in this series appeared with more consistent intensity in the manic-depressive cases and has been of very much less prominence in dementia præcox.

The reaction elects the deeper cell layers both in regard to frequency of occurrence and degree of reaction.

The cortices of the dome, precentral, postcentral and frontal, seem to show the reaction with greater intensity than do the temporal and occipital regions.

Age at the time of death seems to play some part in the occurrence of severe reactions, but cannot be considered the only factor.

The duration of the psychosis bears no demonstrable relation to satellitosis.

It is not the mere presence, then, of *some kind of destructive changes somewhere in a brain* which promises to solve these most difficult clinical problems. Decades of experience with *état criblé* and cortical arteriosclerosis in general hospitals should alone dispose of so crude a hypothesis.

The first question of our study is this: *Do the brains of manic-depressive cases, studied by the same methods employed in work on dementia præcox, show anomalies or scleroses similar to those found in dementia præcox?*

## II. ANALYSIS OF CASE-GROUPS, WITH SPECIAL REFERENCE TO EXCLUDED CASES.

Available for an orienting study were 49 cases of mental disease in which the diagnosis of manic-depressive insanity had been made on criteria, largely Kraepelinian, at Danvers Hospital. If some of these were really cases of dementia præcox, they might possibly stand out as such on the basis of lesions which they would prove to have. From prior consideration it seemed best to exclude 6 cases of involution-melancholia (811, 821, 895, 1397, 1399, 1419), which happened to be all female. We remain with 43 cases, numerically a proper foil to the 37 cases of dementia præcox supposedly "non-organic" which we before studied (1910).

Of these 43 cases, the following presented gross lesions of interest in this connection: 1067, 1097, 1156, 1170, 1173, 1277, 1284, 1305, 1327, 1356, 1373, 1426; i. e., 12 cases, or 28 per cent. These lesions include scleroses, atrophies and anomalies, wherever found, but do *not* include hemorrhages, cysts of softening, or other focal lesions, which occurred in 4 other cases. Should we exclude these 4 cases from our 43, we obtain as a percentage of manic-depressive cases having focal convolucional scleroses, atrophies, or anomalies (12 in 39), 31 per cent.

The above-detailed cases, it will be remembered, formed a group of 12 with lesions and anomalies more or less similar to those found in the dementia præcox study (1910).

1067 should be at once excluded both from numerator and denominator, leaving 11 in 38.

NOTES OF THREE CASES REGARDED AS DEMENTIA PRÆCOX.

On the whole, I should myself be tempted to consider 1097, 1305, and 1373 as more fitly placed in the dementia-præcox group, and should exclude these also from both parts of the fraction, leaving 8 focal lesion cases in 35. On account of the importance of *not* excluding any focal-lesion cases of manic-depressive cases by a *post facto* diagnosis of dementia præcox, I present condensed histories in these three cases.

G. M., male, D. S. H. 12827, Path. Lab. 1097.

The diagnosis of manic-depressive insanity, depressed phase, was made in this laborer of 29 years, largely on his general appearance and apparent depression. It is doubtful whether there was at any time in the single attack, which lasted in all less than one year from onset, any differential sign of manic-depressive insanity.

The hereditary taint was strong: brother insane, dead at Worcester State Asylum at 29 years; a second brother under treatment for nervous prostration; father alcoholic and a suicide at 50 years; father's brother insane, probably with dementia præcox; mother, one brother and a sister not insane so far as known.

Patient left school at third grammar grade at 14, sustained a fall upon the head about that time, underwent "typhoid-pneumonia" in the Spanish-American War, used little tobacco, some alcohol, had several attacks of gonorrhea and was unmarried. Tried to commit suicide with creolin on a drinking bout at 27 years.

At onset (29 years), morose, loafing about house. Four weeks later stopped work and vanished, only to return with bundles of meat and a complaint of having been robbed of his money. Patient thought the family infested with vermin and combed a baby's hair for hours on that hypothesis.

Signs of pulmonary tuberculosis on admission to D. S. H. December 2, 1905. Tremors general, particularly of tongue and of extended fingers. Idea of vermin constant, possibly based on tactile hallucinations. Vermin also seen. Auditory hallucinations possible. A peculiar "sick" smell at times. Consciousness clear. Orientation for time and persons imperfect (indifference). Vague and shifting delusions (lice, poison, "Place will burn"). Refusal of food, weeping, wringing of hands, appearance of depression.

May 24, 1906, about a dozen generalized convulsions. The lips twitch; eyelids tighten; mouth pulls to left; left arm, then left leg, stiffens; toes of both feet strongly flexed; mouth pulls to right; right eye shifts to

right. Skin livid, breathing stertorous, groaning. Later, arms keep twitching; left side of face finely tremulous; gasping; grimacing, incontinence of urine. Pupils dilated, non-reactive to light. Upward bend of all toes on plantar stimulation. Convulsions suspended by hyoscin.

During the winter many boils and re-infections. Death after increasing weakness and ten days' symptoms of tuberculous enteritis, September 18, 1906.

A review of the case on clinical grounds alone would suggest a preferred diagnosis of dementia præcox.

#### ANATOMICAL DIAGNOSIS.

General muscular atrophy.

Marked malnutrition.

Sacral and trochanteric and left iliac decubitus.

Tuberculosis, with cavitation of both upper lobes and right middle lobe of lungs.

Infarct of left upper lobe (occlusion of vessel by caseous material).

Tuberculous ulcers of jejunum and ileum, with peritoneal tubercles.

Tuberculosis of mesenteric lymph-nodes and peribronchial nodes.

Typhlitis and colitis.

Chronic adhesive pleuritis of both upper lobes, right middle lobe and posterior part of right lower lobe.

Chronic fibrous pericarditis.

Chronic fibrous endocarditis.

Slight mitral and aortic valvular sclerosis.

Slight coronary arteriosclerosis.

Chronic splenitis.

Chronic perisplenitis, with adhesions.

Chronic orchitis, right.

Slight aortic sclerosis.

Calvarium dense and heavy.

Chronic external adhesive pachymeningitis.

Chronic fibrous leptomeningitis (right precentral, left superior frontal, right third temporal, sulci, and about pineal body).

Slight sulcal anomalies.

*Hypoplasia of left transverse sulcus of orbital region.*

*Left gyrus rectus narrower than right.*

*Prefrontal gliosis, especially left.*

Cerebellar gliosis (?).

Chronic inflammation of inferior halves of drums, especially right.

No gross lesions of spinal cord.

#### HEAD FINDINGS.

*Pia mater*, in the main, normal; thin and transparent, but thickened in a few foci, particularly about the arachnoidal villi, and especially in right precentral sulcus, in left superior frontal sulcus 4 cm. from frontal pole,



and in the right third temporal sulcus in a plane with uncus. The thickenings in the left frontal and right temporal regions amount to small frank scars, 4 mm. thick in the middle. The tissue of the velum interpositum also unusually dense about the pineal body; there is no especial thickening of the pia about the cisternæ; at the base, the vessels of the cranium show no gross signs of sclerosis. Pia mater strips readily in all parts.

Brain weight 1115 grams.

*Fissuration* shows trifling anomalies on the two sides; the right transverse sulcus of the orbital region is well developed, the left almost absent. The substance shows a faintly darker color than usual. The left gyrus rectus is narrower than the right. Consistence slightly reduced except in the two prefrontal regions, of which the left is firmer. The hippocampal gyri are not unduly firm.

*On section*, the left prefrontal region, the sulcal surfaces beneath the scar in left first frontal sulcus, and the external face of the left gyrus rectus are visibly atrophic, being narrower and of a lighter color than the adjacent cortex. The tissue beneath the scar in the right temporal sulcus is not visibly atrophic.

*Basal ganglia* show no gross signs of lesion.

*Cerebellum* of uniform consistence, which is slightly subnormal. The laminæ look somewhat narrower than usual.

Olives and dentate nuclei of even and slightly reduced consistence.

A. L., female, D. S. H. 8559, Path. Lab. 1305.

Committed June 9, 1882, as suicidal and vagrant and classed under "chronic melancholia." Father died from some form of "paralysis." An aunt and cousin insane. Delusions of self-reproach and of persecution.

Attacks said to have occurred at 35, at 45 (four months' duration), at 47 (five months' duration). Discharged October 24, 1882. Recommitted March 30, 1893; discharged May 27, 1896; recommitted January 30, 1897. Despite these apparently separate attacks, the whole case presented the appearance of a long-standing dementia præcox of paranoid trend, with a certain variability of attitude. At times patient's delusions would retire into the background, and her attitude could be characterized as one of reticence on certain topics. The total picture showed now a quiet depression or a surly unresponsiveness or restlessness and quarrelsomeness, or suicidal tendencies. March, 1902, an epileptiform seizure. 1905, amnesia prominent. 1906, increasing feebleness, but maintenance of flesh. 1908, disturbed, complaining, making suicidal threats, disoriented, amnesic, subject to involuntary urination. February 22, 1909, death after three days' acute illness.

#### ANATOMICAL DIAGNOSIS.

Bronchopneumonia.

Acute bronchitis.

Peribronchial lymph-nodes enlarged.

Injection of intestine.  
Congestion of ileum.  
Injection of trigone in bladder.  
Arteriosclerosis, basilar and of finer branches.  
Extreme calcification and atheromatous ulceration of aorta.  
Heart hypertrophied, weight 415 grams.  
Chronic valvular sclerosis, mitral, tricuspid, aortic, with calcification.  
Hydropericardium.  
Sclerosis of ventricular walls.  
Cloudy swelling heart muscle.  
Slight beginning cirrhosis of liver.  
Chronic interstitial nephritis, with cysts.  
Anomalous position of left adrenal.  
Chronic gastritis, with dilated stomach.  
Chronic perisplenitis.  
Calcification of terminal bronchi (?) in lungs.  
Chronic endocervicitis.  
Chronic cervicitis.  
Serous cysts of Fallopian tubes.  
Atrophy of ovaries.  
Eversion of left leg.  
Edema of lower eyelids.  
Unequal pupils.  
Teeth absent.  
Calvarium dense.  
Chronic pachymeningitis.  
Slight chronic leptomeningitis.  
*Cerebral softening, right precentral gyrus and right basal ganglia.*  
Narrow superior temporal gyri.  
Hypoplasia (?) of left superior temporal gyrus.

#### HEAD FINDINGS.

*Brain weight 1220 grams.*

Left hemisphere a trifle longer than right, which presents a blunted tip. Both frontal poles firm; otherwise the left side shows normal consistence, with exception of first temporal gyrus, which is narrow and of lessened consistency as compared with other gyri. In the parietal portion of the right cerebrum, the consistency is much below normal; and the precentral gyrus, 2 cm. from median line, has a softened area 1 cm. in diameter, with loss of contour of gyrus. First temporal gyrus same as on left side. The right caudate nucleus shows a softened area with entire loss of internal capsule, the softened area being about 2 cm. in diameter.

No other areas of softening found.

Cord shows no gross lesion.

J. M., male, D. S. H. 15368, Path. Lab. 1373.

An English saw-maker. Father a suicide. Gonorrhea at 24, with attacks of inflammatory rheumatism at 24 and at 30. Since then attacks

of sciatica, lumbago, muscular rheumatism. Headaches began at 33 and lasted till three years before commitment, when a feeling of pressure at top of head replaced headaches. Wife had one miscarriage. Alcohol and tobacco moderate. Regular churchgoer. "Nervous prostration" at 47, depression, insomnia, restlessness, delusions of self-reproach, spells of praying, elated periods, visual hallucinations, "shaking in the bowels." On commitment, December 6, 1909, orientation good, memory remarkably good, attention hard to secure, auditory hallucinations, persistent belief that "everyone has three doubles," untidiness, motor restlessness, flighty conversation. Death from dysentery, January 6, 1910.

#### ANATOMICAL DIAGNOSIS.

Bronchopneumonia.  
 Acute ulcerative colitis.  
 Mesenteric lymphnoditis, bronchial, retroperitoneal.  
 Superficial abrasions.  
 Coronary sclerosis.  
 Slight basilar sclerosis.  
 Ventricular endocarditis.  
 Chronic fatty myocarditis.  
 Slight hypertrophy of heart.  
 Fatty liver.  
 Focal congestion (?) of liver.  
 Chronic interstitial nephritis, with congestion.  
 Hypertrophy of prostate.  
 Distention of bladder.  
 Chronic perisplenitis.  
 Scar at apex of left lung.  
 Thickening of mesentery.  
 Hypernephroma of adrenal.  
 Emaciation.  
 Perforation of left and opacity of both ear-drums.  
 Slight chronic internal adhesive pachymeningitis.  
 Slight chronic leptomeningitis.  
 Encephalomalacia (encephalitis ?) of temporal lobes.  
*Superior parietal hypoplasia or atrophy.*  
*Frontal sclerosis (crowns of gyri).*

#### HEAD FINDINGS.

*Brain weight 1450 grams. Pons and cerebellum weight 170 grams.*  
 Convolutions well rounded with exception of *superior parietal gyri* on either side. *These are smaller than normal and depressed* below the surface level. Brain firm throughout, resilient over superior aspect. Cornua ammonis a trifle softer than usual. *Ventricles* smooth. Consistence of temporal lobes softer than any other portion of brain. Choroid plexus slightly cystic. *The frontal regions on section retract from under the*

*knife, and the grey matter over the crowns of the gyri is china-white.*  
White matter throughout the brain shows many small bleeding points.

Cord shows injection of pial vessels; otherwise grossly negative.

The outstanding eight possibly manic-depressive cases are:

1156: Probably high-grade imbecile, apparently never schizophrenic.

1170: Perhaps involution-melancholia, apparently never schizophrenic.

1173: Attacks, hypochondriasis, apparently never schizophrenic.

1277: Hysterical reactions, perhaps schizophrenic.

1284: Obscure, delusional, apparently never schizophrenic.

1327: Attacks, depressive, apparently never schizophrenic.

1356: Attacks, depressive, apparently never schizophrenic.

1426: Hallucinations, apparently never schizophrenic.

If we exclude 1170 as involution-melancholia, leaving 7 in 34, we arrive at a group of cases of which only one (1277) yielded phenomena simulating, if not demonstrating, schizophrenia.

#### NOTES OF TWO CASES EXCLUDED FROM THE MANIC-DEPRESSIVE GROUP.

W. S., male, D. S. H. 13591, Path. Lab. 1170.

Patient was a shoemaker, somewhat given to alcohol, a widower, 64 years. A sister committed suicide at 56, another sister and a brother nervous. Mother nervous, but died at 91. Patient grew tired easily the winter of 1906-7 and began to worry over a strike. Working for a new company, he felt he was being thought a scab and finally stopped work, attempted to choke himself to death with a rope, and entertained delusions of poisoning.

On commitment, April 11, 1907, the main features were delusions of poisoning, anxious depression, hallucinations of taste, smell, and hearing. Death occurred May 12, 1907, as a result of cellulitis of the arm.

Whatever the nature of this case, it does not appear to be a classical instance of manic-depressive insanity. Possibly it belongs to the melancholia group.

#### ANATOMICAL DIAGNOSIS.

Infection of right arm.

Acute nephritis.

Hypostatic pneumonia, with acute fibrinous pleuritis of posterior third of both lower lobes.

Abscess of muscles of left first intercostal space.

Ecchymoses of scalp and of subcutaneous tissue of abdomen and around prostate and neck of bladder.

Fatty myocarditis.

Coronary, basal, and internal carotid sclerosis (a few foci).

Fibrosis of apices of both lungs.

Chronic adhesive pleuritis of right apex.

Cervical and thoracic myelomalacia (autolytic process hastened post mortem?).

Atrophy of both central regions best marked in *post central gyri*, and especially in the upper third of the left postcentral gyrus.

Erosions of inner table of frontal bone.

Chronic external adhesive pachymeningitis.

Chronic fibrous, leptomeningitis of vertex of cerebello-medullary cisternæ

General encephalomalacia (autolytic?).

*Gliososis of lumbar spinal cord.*

#### HEAD FINDINGS.

*Brain weight* 1415 grams.

Brain substance shows little variety of consistence and is almost uniformly softer than normal. The hippocampal gyri maintain their firmness to some extent. Upon stripping the pia mater, the convolutions show considerable visible atrophy (or hypoplasia) in the central regions (especially of the left side), but no difference in consistence can be detected with the finger between these convolutions and the rest of the brain. The convolutions of the left central region show the maximal atrophy (or hypoplasia) seen in this subject. The *sulci* appear somewhat abnormally distributed. The upper third of the left postcentral gyrus is reduced to a slender ridge, nowhere over 1 cm. in thickness and tapering somewhat sharply toward the crown. Right postcentral gyrus is also narrower than right precentral gyrus. Section of the central regions of both sides show that the white matter of the postcentral gyri retracts a trifle more from the surface of section than that of the precentral gyri. No similar alterations can be seen elsewhere in the brain.

Weight of *cerebellum, pons and bulb*, 175 grams. Tissue in no way remarkable except for general reduction of consistence.

*Ventricles* not remarkable. *Basal ganglia* normal. The cervical and thoracic regions of the *spinal cord* show a considerable reduction in consistence, with herniation of white substance from the surface section. The lumbar region, on the contrary, cuts firmly.

L. W., female, D. S. H. 14469, Path. Lab. 1277.

Patient died in the second attack of what may very well be manic-depressive insanity. The first attack was one of excitement at 45, two

years after the menopause, occasioned apparently by reaction to a hoax played by her nephew (elaborate pretense of suicide). The second attack was at 58, regarded as a reaction to a quarrel with certain co-tenants over house matters. The interval was quite clear.

Patient was youngest of five children. An older sister was peculiar and given to violent outbursts. The other three children lived to middle age without insanity. The patient's father was normal and temperate; death at 87. The patient's mother was normal till 85, when senile dementia set in; death at 86. The maternal grandmother was a notorious crank, thought to be insane.

Patient was rather a delicate child, grew robust at 16, was subject to fits of bad temper and was a good scholar; illegitimate child at 23. After marriage, several pregnancies, but only one survival to term, with death of child soon after.

The first attack at 45 showed excitement and depression, with delusions of poisoning and two attempts at suicide. The diagnosis of acute mania was made at one time. Numerous details are available of both attacks; the second attack resembled the first, with auditory hallucinations added. On physical examination, August 11, 1908, there was some question of hysterical anesthesia or of a hysteroid reaction (patient lying flaccid in uncomfortable postures and not responding to pin-pricks, eyelids held tightly together). At first tube-fed, restless and untidy, patient later brightened somewhat and became well-oriented. Hypochondriacal ideas ("numb and paralyzed all over," "cancer of mouth"). Stupor came on once more with same passive but less resistive attitude as before (eyelids kept closed), albuminuria, rapid, irregular heart, puffy face and ankles. Death September 20, 1908.

#### ANATOMICAL DIAGNOSIS.

Acute diffuse nephritis.  
Chronic interstitial nephritis.  
Acute inflammation of ileocecal valve.  
Acute endometritis, with polypi.  
Atheromatous ulcers of aorta.  
Slight aortic-valve sclerosis.  
Sclerosis of ventricular wall.  
Fatty myocarditis.  
Edema  
Obesity.  
Fat-replacement of pancreas.  
Fatty liver—passive congestion of liver.  
Cholecystitis.  
Focal adhesive pleuritis.  
Chronic bilateral hydrosalpinx.  
Contused wound of nose.  
Dilated pupils.

Calvarium dense.

Compensatory subpial edema.

*Cerebral atrophy, frontal and precentral.*

#### HEAD FINDINGS.

*Brain weight* 1205 grams.

In the *frontal and precentral* regions of both hemispheres there is marked *narrowing of convolutions* and yawning of sulci. Posterior to Rolando and inferior to Sylvius, the convolutions are of about normal width. The vessels of the circle of Willis are soft, and free of demonstrable thickening except at the commencement of left posterior cerebral, at which point there is a minute yellowish plaque. On palpation the hemispheres are of uniform firmness. Ventricles contain a small amount of clear fluid. Ependyma smooth. Cut surface of brain not remarkable. *Basal ganglia* normal. Weight of *cerebellum and pons*, 155 grams; not remarkable.

*Cord* not remarkable.

If one followed the Bleuler concept of dementia præcox as schizophrenia, there would thus remain 6 cases showing focal lesions or anomalies in a group of 33 cases of manic-depressive insanity. Although I acknowledge that the diagnoses in these 6 are not all trustworthy, yet we shall be overstating rather than understating the percentage of focal brain appearances in manic-depressive insanity if we state it on this basis, namely, 18 per cent.

Here is the group:

1156, 12004: Female, onset at 19, attacks, death at 25; regarded as manic-depressive, but possibly as dementia præcox and probably as in any case somewhat feeble-minded.

1173, 13461: Female, onset at 28, attacks (perhaps not well in intervals), death at 62; "hypochondriasis on a psychasthenic basis, possibly manic-depressive" (son a Danvers patient).

1284, 14583: Male, onset at about 50, death 17 days from onset; intensely hallucinated, hyperreligious, self-accusatory, following exile from Turkey (Armenian) and loss of property in Chelsea fire. The diagnosis must remain in doubt.

1327, 15061: Female, onset at 50 (8 months), second attack at 73 (death after 5 weeks); strong hereditary taint, probably manic-depressive.

1356, 15251: Male, onset at 60 (suicidal, 6 months), second attack at 65 (death after 7 weeks); very strong hereditary taint, probably manic-depressive.

1426, 15724: Female, onset at 52, death after 5 or 6 months of symptoms, possibly manic-depressive.

I assume that 1156, 1173, 1327, and 1356 might be generally accepted as manic-depressive cases; and removing 1284 and 1426 as too fulminant for diagnosis, we should arrive at 4 focal cases in 31, or at least 13 per cent.

#### EXCLUDED AS TOO FULMINANT FOR ACCURATE DIAGNOSIS.

K. M., male, D. S. H. 14583, Path. Lab. 1284.

Armenian, about 50 years old (grandfather a suicide), thought to have brooded over his exile from Turkey, overworked and exhausted. Lost furniture in the Chelsea fire. Two days before commitment, refused to go to work in shoe factory, confessed his sins to the priest, and told his son to pray. Visual hallucinations. Ideas of self-reproach (cause of the Chelsea fire). Persistent beating his head and eyes. On commitment, October 3, 1908, beat his eyes and eventually blinded himself. Disorientation complete. Restlessness. Persistent talking about sins, Turks and the government. Stuffed ears with rags (auditory hallucinations?). Death October 18, 1908.

#### ANATOMICAL DIAGNOSIS.

Partial absorption and suppuration of both eyeballs.

Extensive abrasions of face, neck and chest.

Abrasions of both olecranon and of both feet.

Acute nephritis.

Hypostatic pneumonia of right side.

Acute fibrinous pleuritis.

Edema and congestion of base of left lung.

Enlargement of bronchial lymph-nodes of right side.

Acute splenitis.

Congestion of pia mater.

Enlargement of duodenal lymph-node.

Chronic ventricular endocarditis.

Sclerosis of mitral valve, aortic arch, coronary and basilar arteries.

Fibrosis of border of liver.

Slight cirrhosis of liver.

Emaciation.

Arachnoidal villi in excess.

*Prefrontal atrophy.*

*Prefrontal, frontal, and occipital gliosis.*

Cerebellum and cord soft.

#### HEAD FINDINGS.

*Brain weight 1385 grams.*

The anterior and posterior poles are firmer than the central and ventral regions of the brain. The cortex, on section, is a trifle greyer in these



regions than elsewhere. The prefrontal region shows a slight narrowing of cortex. Gyri in general of a normal richness and appearance. The puncta cruenta of the interior do not seem unduly injected. No granular ependymitis was demonstrated.

*Cerebellum*, weight with *pons*, 155 grams, soft.

*Spinal cord* not remarkable.

D. P., female, D. S. H. 15724, Path. Lab. 1426.

Normal until 52 years, when influenza kept patient in bed a week and left her weak, depressed, "nervous," delusive about neighbors, crying in spells. Later, auditory hallucinations, explained as delusions. Eventually, ideas of self-reproach and, four months after onset, attempt at suicide with razor. After recovery from this attempt, self-reproachful ideas persisted and deepened. Death after 5 days of dysentery, 26 days after commitment.

#### ANATOMICAL DIAGNOSIS.

Acute hemorrhagic colitis.

Localized fibrinous exudate over colon.

Beginning bronchopneumonia.

Congestion of lungs.

Cloudy swelling of heart muscle.

Atrophy of spleen.

Chronic inflammation left internal laryngeal wall.

Chronic interstitial thyroiditis.

Scar of neck.

Sclerosis of coronary arteries, aorta, left carotid and innominate arteries.

Edema in legs.

Anemic thoracic muscles.

Chronic interstitial nephritis, with cysts.

Chronic adhesive pleuritis.

Scar at apex.

Chronic focal perihepatitis.

Cystic glands of cervix uteri.

Cystic organ of Rosenmüller.

Injection of Fallopian tubes.

Slight splanchnoptosis.

Asymmetry of face.

Lüenizæ atrophicæ.

Calvarium dense and thick.

Marked pigmentation of pia over medulla.

*Atrophy of left third frontal, left precentral and right postcentral gyri.*

## HEAD FINDINGS.

*Brain weight* 1280 grams.

Frontal lobulations plump. Considerable gaping of sulci around left third frontal convolution, with distinct depression at beginning of left Sylvian fissure. Left prefrontal convolutions much narrower than the right while the left postcentral is slightly larger than its fellow on the right. No areas of softening. Slight increase in resilience in the right prefrontal region. The *pia* strips from brain easily.

If we look more narrowly at the four remaining (*viz.*, 1156, 1173, 1327, 1356), having in mind anatomoclinical correlations, we are not astonished at some of the things found. Thus, the fact that 1156, suspected of imbecility, should show small and overnumerous convolutions in the left superior and middle frontal region (as well as microscopic changes) is not surprising; but the findings may have little or nothing to do with the manic-depressive phenomena.

1173, again, shows frontal lesions, in the form of a bilateral atrophy; there was also a somewhat generalized gliosis as indicated by induration, involving both cerebrum (especially occipital regions) and cerebellum. There were various acute changes (including axonal reactions) in all parts of the central nervous system examined (death ascribed to chronic Bright's disease). The correlation between the frontal emphasis of the lesion and the generally delusional nature of the symptoms is striking. Otherwise the whole nervous system may be said to have reacted with equal mildness to the degenerative process, whatever it was.

1327 was another instance of frontal emphasis of lesions, here confined to the two prefrontal regions. The brain weight indicates a loss of perhaps 100 to 110 grams, with some internal hydrocephalus. There was also in this case a marked cerebral arteriosclerosis, together with an internal capsular cyst of some standing.

1356 showed also a generalized mild induration of brain and cord, with a tendency to atrophy or aplasia of the left postcentral and right superior parietal regions. This case had considerable disorder of consciousness from time to time, terminating in periods of depression with delusions, and consequently regarded as due thereto. Perhaps the case belongs in one of Kraepelin's newer subgroups in dementia præcox (1913).

I give, below, these:

FOUR CASES, WITH FOCAL BRAIN LESIONS, REGARDED AS POSSIBLY  
BELONGING IN THE MANIC-DEPRESSIVE GROUP.

K. T., female, D. S. H. 12004, Path. Lab. 1156. This case was termed one of manic-depressive insanity, depressed phase, but dementia præcox was a diagnosis also entertained. A "constitutional basis" was maintained. It is possible that patient should be regarded as an imbecile of high grade, with occasional suicidal and depressive attacks.

The patient was an English girl (father intemperate, an uncle insane after stroke, another uncle epileptic) who came to the United States at 8 years, finished school at 14, worked in mills till 19.

August, 1901, patient grew despondent after menses ceased; October 13, cut her throat with a carving-knife; and was committed to Westboro State Hospital, November, 1901. Discharged recovered May 1, 1902. Patient then began to lead an irregular and immoral life, and was committed to Danvers State Hospital August 7, 1902, with insomnia, pains in head, and threats of violence. Patient became euphoric and amiable, but about October 1, 1902, began to be depressed and to have crying spells, and to find fault. Excitement, abusive and profane language, and sauciness followed. Discipline by transfer from one ward to another was usually successful in changing mood. Discharged on trial visit March 25, 1903.

Recommitted June 27, 1904, after spasmodic attempts to go to work and resumption of irregular life (gonorrhea). Discharged much improved on trial visit July 5, 1905, but was returned September 27, 1905, after another resumption of immorality, in a restless, euphoric state. Tubercle bacilli were demonstrated in the sputum in June, 1906. Moods were variable. There were some outbreaks of sharp excitement, other short periods of depression. Phthisis began early in 1907. Sacral bed sore. Ischio-rectal abscess. Death March 24, 1907.

ANATOMICAL DIAGNOSIS.

Tuberculosis of lungs, with cavitation and bronchiectasis.

Tuberculosis of bronchial lymph-nodes.

Tuberculous ulceration of jejunum, ileum and colon.

Enlargement of mesenteric lymph-nodes.

Miliary tubercles of liver.

Miliary tubercles of kidneys.

Amyloid reaction of liver and spleen.

Emaciation and anemia.

Sacral decubitus.

Decubitus of heels.

Aortic sclerosis.

Chronic fibrous myocarditis, especially of left auricle.

Chronic fibrous endocarditis, especially left ventricle and auricle.

Slight mitral sclerosis.

Slight coronary arteriosclerosis.

Serous pericarditis and peritonitis.

Chronic adhesive pleuritis.

Chronic external adhesive pachymeningitis.

Slight chronic leptomeningitis (parietal).

*Slight tendency to microgyria of left superior frontal and middle frontal convolutions.*

Calcified plaques in lumbar pia mater.

#### HEAD FINDINGS.

*Brain weight* 1310 grams.

Consistence is not especially firm. Convolutions over the *first and second frontal* regions on the *left* are *smaller and more numerous* than the corresponding area on the right. On section the tissue is bloodless. The ventricles are free from granulations, no sclerosis in the basal vessels.

*Spinal cord*: Pia over posterior surface of cord has numerous whitish thickenings; otherwise not unusual.

M. B., female, D. S. H. 13461, Path. Lab. 1173.

"Hypochondriasis on a psychasthenic basis." "The diagnosis of manic-depressive insanity can be stretched possibly to cover this case." Always peculiar, patient had possibly nervous prostration at 28 years, after the birth of a second child. (This child, a son, was a patient in D. S. H., 7654). Thereafter always ailing and taking patent medicines. Developed ideas of liver trouble and of slivers in food and on clothes. Committed at 53 to D. S. H., December 3, 1898, and discharged May 1, 1899, much improved. Recommitted January 11, 1907, with delusions concerning liver disease, contamination by dust, and splinters in her clothes, the latter probably based on hallucinations. Death May 24, 1907, with chronic nephritis.

#### ANATOMICAL DIAGNOSIS.

Interstitial nephritis.

Sclerosis of the aorta, common iliac, and left coronary arteries.

Fibrous endocarditis.

Emphysema of lungs.

Chronic splenitis.

Chronic passive congestion of liver.

Chronic fibrous pleuritis of both sides.

Dilation of the stomach.

Gastroptosis.

Slight emaciation.

Degenerative myositis.

Ecchymoses of the skin.

Tumor of pituitary.

*General gliosis of brain, especially occipital.*

*Frontal atrophy (or hypoplasia?).*

Cerebellar gliosis?

## HEAD FINDINGS.

*Brain weight* 1320 grams.

There is increased consistence of the brain, greatest over the occipital poles, less in the frontal regions, with decreased consistence of the paracentral regions. The frontal convolutions show a narrowing, with widely gaping sulci. On section, the brain substance is firm, and the grey matter shows no atrophy.

Weight of *cerebellum and pons* 145 grams. Cerebellum firm, shows slight increase of consistence.

Small tumor 3 mm. in diameter on anterior surface of pituitary body

*Spinal cord*: No gross lesions.

M. J., female, D. S. H. 15061, Path. Lab. 1327.

A case with two attacks of mental disease, at 50 and 73 years. Both attacks were depressive, the first regarded as due to prostration attending a severe burn, the second without obvious reason. The first attack lasted eight months and was attended in hospital by a few feeble attempts at suicide, and showed apprehensiveness and depression, with some hypochondriacal and suspicious ideas. The second attack lasted five weeks and showed marked apprehensiveness, mild restlessness, slight emotional depression, ideas of self-reproach. There seemed every prospect of recovery from this attack, as there were no signs of cortical arteriosclerosis and little or no impairment of memory. Death was due to an intercurrent cystitis, with hemorrhages from the bladder wall.

*Heredity*: Mother twice insane at puerperium. Mother's sister died at 72, a senile dement for 6 years. Patient's only brother alcoholic and only partially self-supporting.

## ANATOMICAL DIAGNOSIS.

Acute diphtheritic and hemorrhagic cystitis.

Distention of bladder.

Retroperitoneal lymph-nodes enlarged.

Acute proctitis.

One ulcer in colon.

Acute metritis.

Acute cervicitis.

Hemorrhagic infarction(?) of spleen.

Chronic interstitial nephritis, arteriosclerotic type.

Chronic hepatitis.

Cholecystitis and cholelithiasis.

Chronic interstitial pancreatitis.

Chronic perisplenitis.

Atrophy of spleen.

Sclerosis of aorta, coronaries, and internal and common iliacs.

Slight ventricular endocarditis.

Hypertrophy of heart.

Large amount of epicardial fat.  
Atrophy of stomach.  
Hemothorax.  
Chronic fibrous obliterative pleuritis.  
Chronic interstitial fibrosis of lung.  
Central softening of adrenals (postmortem?).  
Anomalous ureter (right).  
Unusual blood-supply of kidney (left).  
Mammary glands atrophic.  
Teeth poor.  
Arrest of development in right hand.  
Scars on forearm.  
Dislocation of right wrist.  
Inequality of length of legs.  
Unequal pupils.

#### HEAD FINDINGS.

*Brain weight* 1195 grams. Weight of brain stem and cerebellum 145 grams.

Considerable atrophy and moderate sclerosis of the prefrontal region. Consistence of the remainder of brain about normal, except the temporal convolutions, which are rather soft. On section of brain, an area of white softening, about 1 cm. in its greatest diameter, is found in the anterior portion (also superior) of the left internal capsule. Lateral and third ventricles moderately dilated. No granulations in ependyma. *Cerebellum* not notable. Cerebrospinal fluid increased in amount.

A moderate subdural hemorrhage over the dorsal surface of the *cord* from the third cervical to the second dorsal segment. The right lateral columns of the cord are somewhat lighter in color, in the region of the fifth and sixth cervical segments, than the left. Some softening in sacral region of cord. Surface of section not notable, except that the anterior horn on the right side, in the midcervical region, is more red than the left.

W. B., male, D. S. H. 15251, Path. Lab. 1356.

A physician, with two attacks of depression, the first at 60 years, after several suicidal attempts and lasting about 6 months, the second at 65, terminated by death after seven weeks (dysentery). The second attack (committed to D. S. H. September 24, 1909) showed some ideas of self-reproach and of a developing cancer, so that the case suggested involution melancholia. This phase of the disease was terminated (October 13, 1909) by restlessness and a screaming, trembling outbreak of almost hysterical character. Improvement was then rapid until November 4, when ideas of self-reproach of a sexual character emerged suddenly, followed by confusion, restlessness, anxious expression and general tremors. This condition deepened until no responses could be obtained. Restlessness in bed. A fall, with bruise of hip. Rapid loss of weight.

Some *hereditary data* are available. The maternal grandmother bore to a second husband one daughter, who died at McLean Asylum. Patient's mother became insane after childbirth. Patient's oldest brother (J. B.) blind from "rheumatic iritis"; sister (M. B.) died of myxedema; brother (M. A. B.) a suicide in financial embarrassment; sister (S. B.) gloomy after husband left her, remarried for pique, diabetic; sister unmarried; sister (C. B.) rheumatic, married, mentally normal; brother (A. B.) died of hemorrhage of lungs; brother (W. B.) living, normal.

#### ANATOMICAL DIAGNOSIS.

Bruises of skin over legs and thorax.

Thrombus in aorta.

Acute nephritis.

Ulcerative duodenitis and proctitis.

Injection left vocal cord and pharynx.

Injection of pituitary.

Icteric conjunctivæ.

Fatty myocarditis.

Hypostatic congestion of lungs.

Healed tuberculosis of right apex.

Aortic sclerosis.

Small spleen.

Atrophy of liver.

Slight fibrous endocarditis and fibrosis of aortic valve and ventricles.

Unequal pupils.

Hypertrophy of prostate.

Skull thin.

Chronic external adhesive pachymeningitis.

Chronic fibrous leptomeningitis.

*General cerebral gliosis.*

*Focal cerebral atrophy.*

#### HEAD FINDINGS.

*Calvarium* thin, with moderate amount of diploë.

*Dura mater* very adherent, removed with the skull-cap. *Pia mater* irregularly thickened.

Convolutional pattern well preserved. The sulci in the right upper occipital and the left ascending parietal regions are markedly gaping; tissue in immediate vicinity softened. The cortex otherwise seems generally firmer than normal, as does the cord.

*Brain* weight 1355 grams. *Pons and cerebellum* weight 175 grams.

*Basal vessels* soft. *Ventricles* smooth. *Pituitary* firm, shows much reddening at extremities.

### III. ANALYSIS OF CASE-MATERIAL, WITH SPECIAL REFERENCE TO CASES SHOWING ANOMALIES, SCLEROSIS AND ATROPHIES.

Accordingly, at the conclusion of the orienting analysis of all available manic-depressive material in a group of about 500 autopsies, I found myself with a very small number showing lesions and anomalies of the type with which I had become familiar in dementia præcox. The findings may be tabulated as follows:

Manic-depressive diagnosis (clinical) .....	49
Exclude as clearly involution-melancholia .....	6
	<hr/>
	43
Exclude as complicated by hemorrhages, cysts, etc .....	4
	<hr/>
	39
Exclude as clearly an error of diagnosis .....	1
	<hr/>
	38
Exclude as dementia præcox .....	3
	<hr/>
	35
Exclude as of very doubtful diagnosis .....	2
	<hr/>
	33
Exclude as of somewhat doubtful diagnosis .....	2
	<hr/>
	31

11 of the 38 cases (or 29 per cent) showed lesions of the focal type. 3 of these (on evidence given above) seem to me to belong to the dementia-præcox group. 8 of 35 (or 23 per cent) remain of the focal-lesion group. I think the evidence above given would also go far to warrant the exclusion of two others (see 1170 and 1277) from the manic-depressive group. If we accordingly exclude these, we arrive at six focal-lesion cases in 33 (or 18 per cent), in two of which the diagnosis is surely not possible to establish. A residuum of 4 cases in 31 (or 13 per cent) remains.

Of course, I do not mean that the problems presented by these excluded cases are solved by the mere process of exclusion. Indeed, we are heaping up a vast deal of trouble by so excluding them. But, in an orienting view of the manic-depressive problem, it is necessary to take cognizance of cases which belong to the classically accepted group. It seems to me that the above data



show that far more cases of manic-depressive insanity are free from focal lesions than are cases of dementia præcox examined by the same methods (1910).

It remains to be inquired how far a more careful analysis of a series of brains from the point of view of systematic photography will make or break this provisional hypothesis. We shall enter upon this photographic analysis feeling certain that we shall find no great number of focal-brain cases, but we shall perhaps be less sure of not finding cases of generalized mild atrophy. Inasmuch as certain cases of dementia præcox also show generalized mild atrophy, we should have to fall back on the hope of finding in the comparison of the two groups something differential microscopically. This hope is for the moment slim in view of Orton's study of satellitosis, which (see above) occurred in both dementia præcox and the manic-depressive psychosis.

#### IV. NOTES FROM THE LITERATURE ON "ORGANIC" CASES OF MANIC-DEPRESSIVE PSYCHOSES.

Several writers have upheld the idea that those cases of manic-depressive insanity which issue in dementia exhibit organic brain changes. Pilcz, in 1900,<sup>21</sup> collected some evidence in this direction both from the literature and from v. Wagner's Vienna clinic. Recognizing possible hereditary factors, Pilcz lays stress on certain acquired factors, and particularly on injuries to the head. Head injuries may work indirectly by providing a *locus minoris resistentiæ* for the hereditary factors, but they may also work directly by providing painful scars which might be conceived to act reflexly, creating mental disorder. Pilcz reminds us of Lasègue's "cerebral cases,"<sup>22</sup> of Krafft-Ebing's concussion cases,<sup>23</sup> and of v. Wagner's claim<sup>24</sup> that brain injury may be of such nature as to produce insanity directly, without recourse to the idea of hereditary taint.

Over and above head injuries, Pilcz became especially interested in *Herde* of other causes, particularly those foci which are of embolic or arteriosclerotic origin, and draws the general conclusion that *dementia in these periodic cases is always attended with focal brain lesions*. "Der Sitz des cerebralen Herdes hat nichts charakteristisches." Wollemer's case showed multiple cortical and thalamic foci of sclerosis.<sup>25</sup> Schüle's showed circumscribed

cortical "hyperplasias" and a tumor of the clivus" (chordoma?). Kirn's case showed cerebral and midbrain atrophy with cranial asymmetry." Worcester's case showed pontine and quadrigeminal cysts of softening." Savage's case showed scar of frontal lobe, pontine lesions." Charron's first case showed left frontal cyst." Charron's second case showed cysts of softening in right frontal region. Doutrebente's case showed circumscribed unilateral frontal meningoencephalitis." Pilcz's first case showed sclerosis of the right dentate nucleus of cerebellum. Pilcz's second case showed scars of right frontal, left frontal and orbital, left superior temporal, and left temporal pole.

Pilcz therefore found 10 cases with an assortment of focal brain lesions, all in dementing cases. He found eight cases sufficiently described so that he could state that they were anatomically negative. Pilcz then introduces a hypothesis that such *anatomically negative and intellectually intact cases* will probably show, upon proper methods of examination, *teratological changes*, such as convolutional anomalies, developmental disorders, factors dependent upon "eine *ab origine* fehlerhafte Anlage des Centralnervensystems."

In brief, Pilcz has reduced the focal lesions to the humbler position of accounting for dementia, and will seek otherwise in the nervous system for signs of the constitutional or hereditary basis of the disease. He believes that certain *hirncongestive Zustände* are possibly accounted for by focal vascular lesions.

Following Pilcz's work, appeared numerous publications dealing with the "organic" idea in periodic mental disease. In 1908, Hoppe published an analysis of 15 cases, autopsied during seven years at the Allenberg provincial asylum of East Prussia (Dr. Dubbers' clinic).<sup>2</sup> Hoppe failed to find the congenital anomalies suspected to exist by Pilcz. Secondly, Hoppe refuses to agree with Pilcz that all dementing cases will be found to have brain scars, but concedes that the signs of chronic brain disease (loss of nerve elements, gliosis, atrophy, hydrocephalus, ependymitis, chronic leptomeningitis) are found in connection with dementia.

On the other hand, Hoppe agrees with Pilcz in his claims that brain scars may serve as irritating factors in the production of mental symptoms of the sort found in the periodic mental diseases. The clinical picture deviates somewhat from that usually found.

The brain-focus cases give more the impression of twilight states such as occur in epilepsy. The excited states are not joyous and not attended by flight of ideas. The depressive phases of these cases may sometimes exhibit emotional dulling, peculiar attitudes, great variation in the clinical picture, and even dementia; in short, these cases may distinctly recall catatonia.

Indeed, the question of catatonia is expressly raised by Hoppe for his thirteenth case, one of pial cyst at the base of the brain, possibly of congenital origin. This cyst occupied the site of the absent right hippocampal gyrus and had pushed to one side the temporal lobe, the pons, and the right cerebellar hemisphere. (A remarkable molding of the temporal lobe had taken place, recalling the conditions of a case published by Ayer from the Danvers laboratory.<sup>20</sup>)

A somewhat similar case, in which the suspicion of catatonia has been legitimately raised, was published by Bönhoeffer<sup>21</sup> in 1903 (depression of left parietal bone, catatonic in all general features, but periodic and given to epileptiform twilight states). An operation by Mikulicz, with lifting of bone into place, improved the mental condition, but true epileptic attacks of wide interval came in to supplant the twilight states.

Taubert, 1910, has published an analysis of 42 cases<sup>22</sup> from Siemens' clinic in Lauenburg, Pomerania. Six of these are fully described. Taubert is inclined to separate genetically the dementing factors from those that underlie periodicity in this group.

Among factors which bring out the latent manic-depressive tendencies are cranial trauma, focal brain lesions, and chronic alcoholism. The cases which exhibit no obvious factors, except heredity, have a good prognosis as to dementia. But the dementing cases of manic-depressive insanity, according to Taubert, do not differ markedly from those that do not dement. Like Hoppe, Taubert fails to find the teratological signs in the brains which Pilcz thought would be found (three such cases in Taubert's series were imbeciles). About one-third of Taubert's cases showed wholly normal nervous systems (14 cases=8 normal+6 with simple hyperemia).

## V. SPECIAL QUESTIONS.

An excursion into the literature of the past decade concerning the periodic insanities yields the following problems:

1. What are the respective parts played by heredity, and by focal lesions of the nervous system (trauma and arteriosclerosis) ?

2. Are there any evidences of hereditary taint of a visible and tangible sort in the shape of congenital anomalies of the nervous system ?

3. Is the dementia which affects some cases of manic-depressive insanity invariably due to arteriosclerotic or other focal lesions ?

4. Are the clinical features essentially modified by the incidence of focal lesions of the brain ?

The heredity problem admits no clear solution in cases which show, at autopsy, lesions of an obviously acquired nature. To disengage ourselves from an embarrassment of etiological riches, we must take up, if there be such, cases without such acquired lesions. From our own list we have laid aside 6 cases of involution melancholia, whose title to inclusion in the group is *sub judice*,<sup>22</sup> and 12 cases complicated by focal lesions of a possibly mental-disease-producing character. We remain with 31 cases whose brains, to a rough analysis, are free from disease-bearing factors and are therefore the proper theater for the play of "hereditary instability."

These 31 cases have been thrown into six groups, according to their ages at death. With a few other data, I have set down the main hereditary factors.

#### GROUP I. DEATH IN THIRD DECADE.

Case.	Sex.	Age.	Duration.	Dementia.	Hereditary factors.
1115 13364	F.	28	14	+	Parents peculiar; father's mother insane.
1353 13069	M.	26	4	0	<i>Heredity negative.</i>

#### GROUP II. DEATH IN FOURTH DECADE.

Case.	Sex.	Age.	Duration.	Dementia.	Hereditary factors.
942 12282	F.	32	5	0	Mother tuberculous.
956 12307	F.	33	1	0	Heredity unknown, post-surgical.
1212 13955	F.	37	5	0	Mother's father hemiplegic; father's father alcoholic; uncles alcoholic, insane; mother insane; sister insane; sister's three children insane.

## GROUP III. DEATH IN FIFTH DECADE.

Case.	Sex.	Age.	Duration.	Dementia.	Hereditary factors.
747 7763	F.	41	2	0	Hereditary taint asserted.
774 11131	F.	46	24	0	Father's father insane.
789 11252	F.	46	1	0	Questionable.
959 11657	M.	45	3	0	Negative (data doubtful).
1201 13817	F.	45	32	*	Paternal aunt mildly insane.

\* Amnesia.

## GROUP IV. DEATH IN SIXTH DECADE.

Case.	Sex.	Age.	Duration.	Dementia.	Hereditary factors.
895 11913	F.	54	13	0	Brother died apoplexy; mother nervous prostration.
899 5840	F.	60	long	+	No data.
926 12250	F.	58	1	0	Brother insane; father tuberculous.
972 11857	F.	56	1	0	Father weak-minded; mother insane.
1005 12421	M.	54	14	0	Father's mother insane; father's cousin insane.
1041 12853	M.	55	20	0	Father tuberculous; mother paralytic; cousins insane.
1238 4457	F.	59	long	+	No data.
1348 14325	M.	57	12	0	Questionable.
1386 15221	F.	53	2	0	Negative (but probably involution type).
1425 14108	M.	54	?	0	Mother died of apoplexy; sister epileptic; mother's sister insane, suicide.

## GROUP V. DEATH IN SEVENTH DECADE.

Case.	Sex.	Age.	Duration.	Dementia.	Hereditary factors.
761 10004	M.	65	43	0	No data.
821 11394	F.	63	1	0	Brother died after nervous prostration.
864 11558	M.	68	46	0	Both grandfathers drunkards; brother melancholy; two paternal aunts insane; father and sister and daughter easily depressed.
922 9306	M.	65	44	0	No data.
946 12317	F.	63	41	0	Mother demented; two paternal relatives depressed.
968 12040	F.	65	13	..	Questionable.
978 12340	F.	69	7	0	Father's sister insane; brother insane; brother drunkard.
1111 12564	F.	68	18	+	Sister peculiar, probably insane.
1187 13361	F.	62	37	0	Brother insane.
1306 714	F.	66	40	+	No data.

## GROUP VI. DEATH IN EIGHTH DECADE.

Case.	Sex.	Age.	Duration.	Dementia.	Hereditary factors.
732 3253	F.	71	18	0	No data.

A further investigation of the cases stated to be *without heredity* yields the following:

Data concerning heredity are absent or extremely meager in 11 cases. The remaining cases yield a surprisingly rich array of hereditary evidence. Only two cases of this group fail to yield such evidence, though these two I am bound to say are pretty convincing.

Thus 80 per cent of the manic-depressive insanities of this group, which do *not* show focal scleroses or anomalies of the nervous system, do give history of insanity in near relatives.

One of the two cases might not be wholly acceptable to a strict critic as manic-depressive, since the case (1386) died in her first attack of depression 30 months after onset at 51 (previous history clear). Perhaps the case belongs rather with the involution melancholias.

The other non-hereditary case deserves more attention. 1353 (13069) was the third of six children, four of whom are well, and the fifth died at 5 years of a spinal injury. Father, Irish, living, always well. Mother, Irish, died at 39. Nothing known of grandparents. No mental or nervous trouble in near relatives.

Patient left school at 14 in seventh grade (failed of promotion once). Obedient, quiet, diffident, not interested in sports. Worked steadily four years in a mill (up to \$9.00 per week), later in grocery store for about five years (\$8.00 per week), and helped to support family. Smoked freely. Drank but moderately.

Diseases: Measles and mumps as child. Tertian type of malaria at 16, with many chills despite treatment, and recurrence at 17. Grippe at about 19 (apparently a light attack). "Pleurisy" at 21 (sick three to six weeks), but no evidence of this at autopsy.

So far as a pretty adequate history informs us, there were no upsetting factors whatever. April 1, 1906, patient forgot to deliver his orders, became talkative, and grew restless. Patient developed an excessive appetite, complained of indigestion and

incapacity to work, once threatened to cure himself "in the river," and developed insomnia. An exacerbation of excitement led to commitment. The only known factor which could have led to the condition was worry over not securing a new position on a steam railway.

The disease then followed a course of three years and seven months, terminated by bacillary dysentery. Death from bacillary dysentery at 26 years is a rare incident and is, I believe, in our hospital, unique, so that a peculiarly great loss of resistance must be argued in this case. There is evidence of a bilateral otitis media of unknown date, and there was an acute purulent process in one ear after an attack of tonsilitis in January, 1908.

The disease was characterized by numerous short attacks of excitement, distractibility, playfulness (rarely threatening surly attitude), grimacing. Hallucinations were never thoroughly demonstrated, although auditory ones were suspected. There was an occasional suggestion of catatonic mutism and resistance; but on investigation these proved to be rather emotional reactions. In the intervals between excitements, patient was a quiet, good hospital worker.

This case would seem to show that *upon no hereditary basis, and without obvious external cause*, a series of maniacal attacks can be produced. In patient's social stratum, perhaps alcoholism in parents and grandparents can scarcely be excluded. Otitis media may have some importance. There was a trifling degree of sclerosis in the lower abdominal aorta.

My conclusion at this point is, therefore, that, whether focal brain lesions produce or essentially modify this disease or not, heredity is a very strong factor statistically (80 to 90 per cent) in a series especially studied. I present one case apparently against any absolute regularity in this respect. It is stringently desirable that cases be reported which fulfil these requirements:

1. Classical or typical manic-depressive insanity.
2. No gross lesions or anomalies of brain.
3. No evidence of heredity (data to be above reproach).

But, if manic-depressive insanity may be a heritable disease, may it also be acquired? The difficulty of resolving this question reminds one of cognate difficulties in the study of epilepsy.

In this direction I have reviewed all the focal-lesion cases, with the surprising result that they practically all belong, to the best of my belief, in other groups of insanity or are remarkably atypical cases. The evidence for this needs presentation in full.

The answer to the question stated above (the existence of brain stigmata) therefore depends upon the attitude you adopt to the diagnoses of manic-depressive made in this group.

The cases with cerebral anomalies, or with lesions which are interpretable as such, are virtually all cases in which you might readily refuse to grant the propriety of the diagnosis.

And, just in so far as you grant the diagnosis to all these atypical cases, in so far are you bound to admit that the lesions do modify the course of the disease. Personally, for the present, I prefer to set these unusual cases aside from the great group of manic-depressive insanity. I should be willing to accord them whatever degree of *alliance* with manic-depressive insanity you please; but this alliance should not, I think, be taken to signify identity.

As to the third question based on the literature (the correlation of dementia with arteriosclerotic or other focal lesions), we deal with 5 cases (or 6, if a case with merely amnesia be included) having dementia amongst the 31. All five were 60 years of age or older at death, except one (1115), who died at 28 after 14 years of symptoms. All had symptoms for long periods. It must be remembered, however, that there were no coarse lesions of arteriosclerotic type in the brains of these cases. The dementia, if arteriosclerotic in origin, must have been due to fine changes not readily observed with the naked eye. In point of fact I regard the hypothesis of an arteriosclerotic origin of dementia in manic-depressive psychosis as entirely arbitrary at the present stage of research. The problem should now be taken up on its merits from the histological point of view, on the basis of clinically unexceptionable cases which have demented—and I venture to think few will be found. I know that many alienists will point to cases with the history of attacks and eventual dementia; but we are beyond the phase of science in which purely clinical evidence is decisive on such a point as this.

As to the fourth question (symptomatology possibly modified by focal lesions), I believe the evidence of the present paper goes



far toward pressing the focal-lesion cases out of the manic-depressive group.

## VI. CONCLUSIONS.

1. Kraepelin states that the anatomy of manic-depressive subjects is negative. Various authors have described focal lesions with which to account for the occasional dementia which textbooks mention. Evidence as to the existence of brain stigmata is equivocal. Orton has recently found satellitosis perhaps rather more in manic-depressive than in dementia-præcox subjects.

2. The fundamental and even practically important question of brain-anatomy in manic-depressive subjects has been here taken up precisely with the same ideas and with similar material as in the writer's first study of dementia-præcox brains—namely, with the topographic idea far more prominent than it has been made by most workers in the field of what used to be called "functional psychoses."

3. The first question which occurs to a critic of my 86 per cent of anomalies, scleroses, and atrophies in dementia præcox is: What percentage of similar conditions would "not-insane" subjects show, and what would be shown in the disease manic-depressive insanity? The present paper deals with the latter inquiry and throws indirect light upon the former.

4. As ever, much depends upon what one terms manic-depressive psychosis. In the text I have given relatively full accounts of most cases excluded from my initial list, which comprised every case which had received the diagnosis (at times on decidedly insufficient grounds) in a certain period at Danvers Hospital. Many of my exclusions tend to swell the dementia-præcox group, and these cases may be studied with my dementia-præcox material of 1910. To avoid confusion I have excluded cases of involution-melancholia.

5. As against my 86 per cent lesions in dementia præcox, I regard 13 per cent as a fair percentage for manic-depressive insanity (4 in 31). A little less rigorous clinical analysis would leave the percentage at 18 per cent (6 focal-lesion cases in 33). In a total random material (after certain obvious exclusions) of 38 cases, it would not be possible, I believe, for the most ardent anatomist to find more than 11 cases of focal lesions (29 per

cent). But this last percentage is assuredly too high, since three cases in the group are pretty clearly cases of dementia præcox. Thus 8 in 35 (23 per cent) is a figure which some analysts might prefer, though personally I believe it too high.

6. Roughly speaking, then, we may think of the *manic-depressive* group as exhibiting *brain stigmata or focal lesions* (not arteriosclerotic) in about *one brain in every five*, whereas *dementia præcox* brains show such conditions in about *four out of every five* brains.

7. This finding must be of some significance, whatever the criteria, and whatever particular functional correlations one might infer. The finding does not prove or indicate that the manic-depressive brain is normal; but it does show that the cellular lesions, if any are to be found, must be of a peculiar and probably a reversible nature. And, whereas eager histological researches in the brain are much to the point, perhaps the canny observer will regard the non-nervous organs of the body, or those supplied by the autonomic system, as even more inviting to study in the manic-depressive group.

8. No special histological study is here presented, although some orienting slides have been available in the great majority of cases, from which Orton's conclusions about satellitosis can be in a measure confirmed. Indications of a special line of attack have been presented by Bond in a paper with the writer,<sup>28</sup> and some conclusions bearing on this point have been drawn in the writer's thalamus paper.<sup>29</sup>

9. A study of the literature yielded a few special questions which I have endeavored to answer, largely on the basis of the material without focal lesions, since I regard these four-fifths of my material as far less open to diagnostic suspicion than the one-fifth possessing lesions.

10. The question of the relation of certain instances of eventual dementia to arteriosclerotic brain lesions is provisionally answered in the negative; but the question requires further study.

11. Heredity does not show itself in most manic-depressives in the form of brain stigmata; but the extremely high index of insane heredity in near relatives is remarkable. I am inclined provisionally to regard manic-depressive insanity as constantly or almost constantly hereditary—not in the sense of similar heredity

(this has not been adequately studied), but in the sense that some kind of insanity is almost always, if not always, to be found in near relatives. Without such evidence, I am clinically not now disposed to make the diagnosis "manic-depressive," although it is clear that the rule will not work in the other direction. For the moment, I am challenging my records to produce an unexceptionable case of manic-depressive psychosis which does not show family taint of insanity.

12. Upon these provisional hypotheses, are we to assume that the normal-looking brains of manic-depressives are really normal, *i. e.*, intrinsically,"<sup>22</sup> and merely purveying the impulses which a sick body is producing? Or shall we assume a chemical or physicochemical instability of the entire nervous system, such that, although the brain is intrinsically abnormal, the abnormality does not show as yet? Hereditary taint is consistent enough with either assumption, since the germ-plasm might with equal readiness mark the nervous and the non-nervous parts of the body with those invisible marks that produce "functional psychoses."

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## WHAT IS PARANOIA?

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This is necessarily a very condensed presentation of the subject.

The concepts that have been associated with the term paranoia have been narrowing almost to the vanishing point. Used by Hippocrates in the sense of "mad, delirious thinking"; by Vogel in 1764 as a general term for insanity; and by Heinroth in 1802 and later to signify intellectual confusion, the word was reintroduced half a century ago as the name of a mental disorder characterized by "systematized" delusions, usually of a persecutory or grandiose nature, in a person otherwise fairly clear. It was then synonymous with *primäre Verrücktheit*, *Wahnsinn*, *délire chronique à evolution systematizée*, *monomania*, *primary delusional insanity*—terms which it has largely supplanted since Kahlbaum definitely used it in place of *primäre Verrücktheit* in 1878.

This broad symptomatic concept included a relatively large number of cases, psychiatrists differing widely, however, on many points, such as the relative importance of degree of systematization, chronicity, recoverability, dementia, presence of hallucinations or other symptoms, and also as to whether it was primarily an intellectual or an emotional disorder.

To discuss all these differences would be unprofitable, but certain ones are important, since there still persist certain fundamentally differing view points. Thus Ziehen<sup>2</sup> on the one hand says: "The paranoias are those functional psychoses whose chief symptoms are primary delusions or hallucinations"; he recognizes simple and hallucinatory, acute and chronic forms. *Delirium tremens*, for example, is a pure type of the acute hallucinatory paranoia. Recoveries are frequent, especially among his acute forms. He includes in his paranoias cases which belong in widely different clinical groups. He therefore really uses the term symptomatically, not diagnostically; and his conception is a sterile one as far as further advance in our understanding of the condition is concerned.

On the other hand, almost all other writers limit the significance of the term much more, using it in a diagnostic sense to indicate a group of cases which they believe belong together on fundamental and not merely symptomatic grounds. Kraepelin's conception as defined in 1904<sup>8</sup> is as follows: "There is undoubtedly a group of cases in which delusions are the most prominent, if not the only, symptoms of the disease. In these cases a chronic, stable system of delusions gradually develops without any disorder of the train of thought, of will, or of action." The group thus defined is a small one—about 1 per cent of all cases.

With the exception of Ziehen's followers, most of the writers on paranoia have based their discussions on cases which they regarded as conforming to the Kraepelinian conception. But until the last two or three years even Kraepelin himself has not held rigidly to his own definition, and a close examination of the reported cases (Bleuler's, for example,) on which the discussions have been based shows a large majority to belong in other clinical groups—mild, slowly dementing or stationary dementia præcox, manic-depressive psychosis, chronic alcoholic delusional conditions, etc. Two years ago, Kraepelin,<sup>9</sup> after weeding out his non-conforming cases (which he grouped with some other paranoid conditions under a new heading, paraphrenias), found a small residuum of cases which he regarded as true paranoia. These cases insidiously develop, in persons with psychopathic predisposition, a coherent, stable, logically elaborated system of delusions of endogenous origin, without hallucinations, dissociations, negativism, mannerisms, stereotypies, peculiarities of speech, neologisms, ideas of influence, emotional deterioration or dementia. The personality remains intact. Patients are capable of continuing their usual occupations or at least of being self-supporting. Their behavior is abnormal only as the result of their delusions. The course is chronic. Recovery seldom or never occurs.

Another line of cleavage in the paranoia-concept is that indicated on the one hand by Specht,<sup>10</sup> Gadelius, Kleist<sup>4</sup> and others who maintain that the fundamental trouble is a disorder of the affect, and on the other by Krafft-Ebing,<sup>5</sup> Cramer, Berze,<sup>1</sup> Bleuler<sup>8</sup> and others who claim that it is primarily an intelligence-

psychosis, or at least that the emotional disturbance is not the primary one.

Owing to the prominence of the Freudian psychology, this last decade has seen the development of an interpretive as distinguished from the older descriptive psychiatry. Symptoms, symptom-pictures, even diseases and disease-processes, are being thrust into the background, while the mechanisms of the origin and development of the content of thinking and feeling, and the interpretation and explanation of symptoms, are coming more into the foreground. Make-up or personality and individual experiences assume increased value and importance.

Kraepelin himself, the master of descriptive psychiatry, somewhat yielding to this trend, two years ago wrote of paranoia as being not a disease-process, but a mental twist (*psychische Missbildung*), an abnormal development, occurring under the ordinary stress of life in a person psychopathically predisposed by internal conflicts and by a mixture of egotism and suspiciousness—the “paranoid” constitution.

Bleuler\* (1906) and Hans Maier\* (1913) believe paranoia to be a psychosis in which some complex or group of complexes has for the patient such strong associated feelings or emotions that the content of thinking in lines related to the complex is determined by these affects instead of by facts or logic (Bleuler's autistic thinking). Errors thus arise which the patient cannot correct. Hence, with persistence of the tendency to this affective response to the complex whenever anything in the individual or in the environment arouses associations leading to it, errors are perpetuated, new ones are made, and thus delusions are formed, persist and develop (Hans Maier's *katathymic* delusions). Wishes, fears, or internal conflicts are what give rise to such complexes. Only the thoughts and feelings connected with the complexes are abnormal; all the rest is normal. Hence the absence of dementia or other psychotic symptoms. Autistic thinking and *katathymic* delusions may occur in other psychoses and even in health (day dreaming; social or religious prejudices).

Freud regards paranoia as the expression of a homosexual tendency, but the special case (Dr. Schreber) on which he based this interpretation is one of paranoid dementia, as he himself recognizes, and not one of paranoia in the very strict and narrow sense.



A special predisposition, perhaps consisting in constitutional defect with bad heredity (Krafft-Ebing), a primary disposition to think with short associations (Friedmann), a special psychopathic constitution (Kleist, Bleuler and others), an egotistic and suspicious personality with internal conflicts (Kraepelin), or an imaginative personality with lively emotional reactions (Maier), may be the necessary soil for the development of paranoia.

Practically all writers, except Ziehen and his followers, agree on the chronicity and incurability of paranoia, though a few recoveries have been reported. A critical examination of these cases, however, throws doubt upon the diagnosis of all except Bjerre's.

Two of the characteristics of the condition—the psychopathic personality and the unfavorable outcome—seem to me not fundamentally essential, however constant they may be in actual experience, and however much unanimity on these points there may be among psychiatrists.

That there are cases which conform rigidly to the narrow Kraepelinian description (except as to the type of personality and outcome) I propose to show. Since he has shown that other cases which have been called paranoia can, on rigid scrutiny, be classed with other recognized clinical groups, or excluded from this group by at least a mild dementia, we are justified in applying the term paranoia to this group exclusively, especially as the cases seem to differ from the paraphrenias and other paranoid conditions in fundamental respects.

The two following cases, of which one was reported in 1912 by Bjerre,<sup>1</sup> and the other has been under my own observation, will be cited as briefly as possible.

Bjerre's case is that of a Swedish woman born in 1860, of gifted, eccentric, neurotic, and dissolute as well as some normal heredity, who herself was gifted, capable, common-sense, level-headed, not subject to moods, a teacher and then a journalist. As a child, imaginative, the princess of her own day-dreams. On leaving school, helped her father, a journalist; at 23 completed a three years' seminary course, then taught in schools and private families for 13 years. Didn't especially enjoy teaching and at 36 became journalist on a weekly for two years, traveling to England, France, and Germany, making many acquaintances,

becoming much interested in history, politics, literature, and especially women's work and rights. At seven was told that child-bearing was the curse of God on woman, so she was opposed to marrying—she and her next older sister, to whom she was deeply attached, would live together as two old maids. At 13 she resolved never to marry. At 18 she began an anonymous correspondence, kept up for 20 years, with a man whom she never saw till she was 38. She had idealized him, and in her 20's had met and, out of loyalty to her ideal, given up, after seven years' doubt and hesitation, a man whom she really loved. On meeting her correspondent, however, he proved to be very commonplace, and at once began to flirt with her sister. Thereafter she refused to see him, began to hate him and grew bitter toward the whole world. This was in 1898. She gave up her position without cause and did various kinds of office work. In the winter of 1898-99 she worked for a man in his hotel room, and allowed him to seduce her, justifying herself in it, declaring it was her right, and that she never regretted it. In April, 1899, she followed him to X—— in Germany to continue the relationship, remaining till November, keeping a Swedish maid in her employ. She dreaded conception, partly because of the troubles of a friend of hers who had been hounded and driven to suicide on account of extramarital pregnancy.

*Psychosis.*—In spring of 1899, at 39, she began to think others watched her, and insulted her. Some persons passing her on the street made peculiar movements of the tongue at her, similar to those she had seen men make at a demi-mondaine whom she met at X——. On returning home in November, the hotel waiter made faces at her—he must have listened at the door. People began saying things about her behind her back, and to turn their backs on her; her friends grew cool towards her—the Swedish maid must have told about her. Retrospectively she thinks that in the Christmas (1899) number of Puck there was a caricature of her, and that in February, 1900, a scathing article about her appeared in another journal. Since then the papers contain hints and innuendoes, recognizable by everyone. She then knew that all these things were parts of a general persecution; the waiters all knew about her; through the press the whole country learned of her relations with the man; society judged her and ostracized

her. The conspiracy gradually spread all over Europe, even to America. A general sign language was developed, known everywhere, to inform people about her. Wherever she went she saw evidences of it. In 1903 there was some let-up in the persecution, but since 1906 it has grown worse, and especially since the removal of the uterus and left ovary for persistent metrorrhagia in 1908. More and more people joined the conspirators, so that after street-car conductors, shopkeepers, clerks, waiters, etc., had seen her once or twice, they began to make the signs with the tongue, or to scrape their feet. Wherever she went it was the same. Only at home with her mother was she relatively free from it. There she isolated herself more and more. The head of the conspiracy is a woman's alliance, which exercises inquisitorial powers, and all its members are spies. They are hounding her to death, to make her commit suicide. It is getting unbearable. The bookkeeper where she works (she has continued regularly employed in a publishing house) is a very devil; he stirs up the others and leads the persecution; he makes a sign every time he passes her door; even the chief puts his tongue out at her.

Bjerre talked with her for an hour every other day, very tactfully, without ever contradicting her delusions or antagonizing her, from December, 1909, to March, 1910, without apparently shaking the strength of her convictions in the least. Within the next month she began to accept some, then others, of his alternative explanations, and quickly came to complete correction of all her delusions, with full insight, and no trace of mental disorder or enfeeblement. She remained so for the two years or more that had elapsed up to the time of reporting the case.

We see here the complete integrity of the personality, the gradually growing, logically developed system of delusions, tenaciously held for many years, and the ability to support herself at her accustomed work. We see also a not uncommon situation become the center of several persistent, strongly affective complexes, which give rise to and perpetuate errors of interpretation, which grow into spreading delusions. And we see an imaginative person with lively emotional reactions.

The other case is that of an American man of remote Jewish ancestry, in which there has been talent, emotionalism, egotism,

and some psychopathy, as well as normal traits. Born in the fall of 1873; now 40 years of age. Severe typhoid at six, hyperæsthesia of nose and throat since 17, tremor of hands since childhood, varying in intensity; exophthalmos since 29, variable in degree; slender till 26, then stout. A brilliant student, accomplished in many directions, good at games, imaginative, witty, sociable but shy, gentle, law-abiding, wishing always to be fair-minded, set in his opinions. Graduated from Harvard and Massachusetts Institute of Technology before 24. Then worked as a chemist in a mill-town, where he boarded in the same house with two rich young men who dissipated. In the spring of 1898 when he was 25, they brought a mill-girl to their room and then to his and tried to compromise him. They teased him about it and the whole household learned of it.

*Psychosis.*—A few days later he thought his landlady's manner indicated that she wanted an intrigue with him. Then followed a series of incidents from which he inferred that the two young men, irritated at his refusal to join in the mill-girl affair, were trying to implicate him in some scrape, in order to discredit him and hurt his reputation. Later in the year he interpreted two or three slight incidents to signify that these two men had got a mill-town physician to help them. He then taught chemistry for a year in a remote state without special incident. But at the seaside resort where he spent the summer of 1899 several thefts occurred and he saw a certain politician there. A series of burglaries occurred in his home town, where he spent the following winter and spring, happening to persons with whom he could trace some connection, though often by rather devious routes—similarity of names to those of friends of his, etc. The papers referred to the thefts as being done by an organized gang. The politician above mentioned was again at the seaside resort next summer (1900), and the patient began to think the two young men had enlisted a whole political gang to arrange these thefts and connect them with him to discredit him. He took up teaching and writing, which he did very acceptably to his employers for the next five years. During this time thefts continued. One day someone asked over the telephone if Mr. ———, the chemist was there. As the patient was known as a chemist only in the mill-town and in the remote state, he thought this suspi-

cious. That night the office building was burned. This was the beginning of a series of fires with which the two men evidently sought to connect him. He found confirmation of his suspicions in various incidents, such as the omission or inclusion of his name in the press accounts of whist tournaments in which he took part coincidentally with accounts of incendiary fires. In 1905 he taught in a small New England college, where he began to think the professors' wives made illicit advances to him, which he repulsed. The following year he thought drugs were put into his food, and since then into that of his friends, at the instigation of these women. Students and professors, then the state governor and senators have tried to make him marry. In 1907, at the hospital, he firmly believed that the two men have organized this vast plot, to connect him with thefts, fires and immorality so that his friends won't want him around, but will want to destroy him. He was, and remains, perfectly clear, coherent and logical, with very accurate memory, with no evidences of hallucinations, autochthonous ideas, ideas of influence; no stereotypies or mannerisms. Some of his closest friends had seen nothing abnormal about him up to the time of his admission to the hospital. In the seven years he has been under observation his delusions have grown somewhat. Women on the street-cars or elsewhere make improper advances to him; the drugs may be introduced into the Metropolitan water system; the manner of the nurse indicates that he is forbidden to talk of the drugs; he is at the mercy of any unfair official or machine that chooses to continue drugging him; the use of drugs seems merely a conspiracy to isolate and discredit him; they are beginning to drug members of his family, etc. Meanwhile, he has recently written articles for an authoritative cyclopædia in a special field, and writes frequently at the request of publishers for standard publications. He could be at large but for his threats against store clerks and others whom he accuses of putting drugs into his food or drink.

Here again is the gradually evolving coherent delusion with complete integrity of the personality and ordinary ability for work, without other symptoms. Here, too, is a not very startling situation involving strong, persistent affective reactions, which give rise to errors of interpretation evolving into delusions. We have also an imaginative person with rather intense emotional reactions. We have not enough data in this case to know why

the complexes associated with the mill-girl episode should have so strong a feeling-tone.

A case has just been reported by Gaupp (Münch. Med. Wchnschr., Vol. 61, p. 633, March 24, 1914) of a school teacher of excellent standing in his community, of good judgment, of strong feelings and philosophical tendencies, imaginative in youth, who held slowly growing delusions of persecution (on account of sodomy) for twelve years. No one suspected that he held any delusions whatever until one night, in accordance with a plan which he had worked out and kept in mind for four years, he murdered his wife and four children and eight men.

In these cases the psychical processes as processes are normal. What is abnormal in them is that some of the affects associated with the seduction-complex in the one case and with the personal-honor-complex in the other were so strong and so widely diffused as to determine the content of thinking in two chief directions: (1) of seeing connections between external events and these complexes, and (2) of being unable to see the force of contradictory or rectifying arguments or facts; and they were so persistent as to perpetuate this effect. In Bjerre's case we can see what some, though by no means all, of the experiences were which gave color, strength and persistency to the seduction-complex affects. In the other case we have no such data for the personal-honor-complex affects.

The mechanism here is not unlike that of prejudice, in which an unreasonable judgment is made in disregard of some important and available facts or considerations, the perception of them or of their importance being inhibited by some strong affect which also fosters the formation of erroneous associations, both affective and conceptual. Thus errors of judgment and interpretation arise and are perpetuated by the influence of the affect. Religious, political, racial and other prejudices show this mechanism.

Ordinary errors or mistakes without strong associated affects may persist, or even lead to further errors, but they are comparatively easily correctable by sufficient evidence or demonstration—no strong affect (except that of *amour propre*) has to be changed or suppressed.

Prejudices, however, persist; they may expand a good deal—the antivivisectionist is apt to be an antivaccinationist also, and

in theory at least to believe that all physicians love to torture animals. To correct or overcome prejudices, the affect must be suppressed or supplanted by a different and stronger one—we must overcome certain feelings, as we say. It requires effort, time and patience to do this, but it is sometimes done.

The difference between prejudice and the delusions of paranoia is, so far as I can see, only this: that the complexes in the latter have to do with especially intimate personal affairs, while in prejudice—as, for example, the antivivisection or the negro-equality prejudice—the complexes have to do with more or less extraneous matters, or with matters of comparatively little moment to the individual. Other things being equal, the more importance the complexes have for the individual and the more intimately personal they are, the stronger and more persistent are their accompanying affects, the more difficult is it to uproot or suppress them, and perhaps the greater is their tendency to grow.

For the formation and development of the affect-determined delusions of paranoia we do not need to posit an underlying disease process, but only some experiences and trends that make some precipitating event or series of events arouse unusually intense affects in connection with complexes closely related to what has been aptly called the inner shrine of the personality. Why it is not a more common psychosis, then, is hard to say. Perhaps there is an unbroken series of cases extending from simple prejudice easily overcome and not elaborated, through strongly held, ineradicable prejudices slightly elaborated, to such cases as those just cited. Every person has simple prejudices; the number of persons whom we meet in every-day life who have the very strong, slightly elaborated prejudices is not so very large; it would not be strange, then, if those with the most pronounced type, the paranoiacs, were rare. It may also be that we do not see many of the latter because their delusions are not such as to lead to asocial acts or attitudes, and they protect their sensitive inner shrine by not talking of their ideas—just as many of us avoid political and religious topics unless we are certain of the sympathy of our auditors. That a distinctly unusual combination of both internal and external factors is necessary is suggested by the fact that Bjerre's patient did not develop her psychosis, that is, her delusional interpretation, till she was nearly forty.

The delusions of paranoia tend to expand, and are almost never overcome, though Bjerre's case shows that with sufficient tact, patience, effort, skill and time it may not be impossible to correct even these if one can secure the cooperation of the patient. The reason more cases have not recovered is perhaps due to the extreme rarity of such a combination of favorable factors as occurred in that case.

May we not then agree with Kraepelin's *description* of paranoia, except to say, not that it does not lead to dementia, but that it leads to its own form of dementia, *i. e.*, a tendency to see in more and more trivial events a relationship to the main delusion and a growing incapacity to see events except in relation to the system? And may we not agree in general with Bleuler and Maier as to the *interpretation* of paranoia, but add that the mechanism is like that of prejudice, rather than that of error, and that the basal complexes must be such as have an especially intimate personal significance for the individual, must reach to his inner shrine? It may be that an imaginative personality with rather intense emotional reactions is necessary, as Maier thinks, but this has yet to be demonstrated.

To sum up: Unless we use the word merely in a symptomatic or descriptive sense (in which case it is an unnecessary synonym for the old delusional insanity), paranoia is a psychosis, but not a disease-process. It is neither a pure affect-psychosis nor a pure ideation-psychosis, but rather a combined associational affect-ideation-psychosis. It is a continuous self-perpetuating faulty association of ideas and affects without disturbance of the thinking or affective or conative processes as such. It is purely functional, but not related to the manic-depressive or dementia præcox psychoses, which are ordinarily, though to my mind wrongly, called functional. Hence it does not lead to dementia except in the sense above mentioned, which is merely in the line of its own evolution, and it does not necessarily have any of the symptoms of the other psychoses except delusions, which may occur in all of them. Its mechanism is that of prejudice, but the basal complexes involved are very intimate and personal ones with correspondingly strong and durable affects.

This conception gives us some therapeutic hope, realized in at least one case.



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## DISCUSSION.

DR. C. B. BURR.—I should like to ask Dr. Abbot how important he regards the three distinct stages in the development of paranoia upon which Krafft Ebing in discussing primäre Verrücktheit, a form of disease for which paranoia is but another name, lays very great stress. These stages are as follows: The first of apprehension, misgiving, suspicion—the so-called persecutory state. Second, the stage in which the individual discovers an explanation for the persecution to which he has been subjected—the stage of transformation. Third, the stage of exaltation, owing to the fact of this discovery. Comfortable delusions are related thereto. While ideas of persecution persist, they are in the main in abeyance and overshadowed by those the contemplation of which results in self-complacency and self-appreciation. In neither of the cases which Dr. Abbot reported was there self-satisfaction or egotism. True paranoia is, to my mind, an evolution showing these three stages. Nothing else is paranoia to me. I believe the expression has been too loosely used and that discussion is important for clarifying the subject.

DR. ABBOT.—Probably the cases showing the three states, exaltation, etc., do not really belong in the regular paranoia group, but on close examination will be found to show very slight degrees of dementia; they show other psychotic symptoms than mere delusions; I think they belong, therefore, in another category—in the paranoid form of dementia præcox or of some other psychosis, and not to the real paranoia group. There are very few cases that have absolutely no other psychotic symptoms; where there are other symptoms than delusions I think we have to do with another underlying condition. Almost all the conceptions of paranoia have really been based on the study of very mildly demented cases that have remained partly or nearly normal.

## IS THERE AN INCREASE AMONG THE DEMENTING PSYCHOSES?

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One dislikes to be a pessimist. The optimist finds greater favor in the world's opinion. The outlook of the pessimist is contracted and discouraging. The optimist is hopeful; he is more apt to have the open vision, and the majority of mankind listen more willingly to his prognostications. In the financial world the public sympathizes with the Bulls rather than the Bears, for the former preach the gospel of good times and encourage belief in the substance of things hoped for. It is therefore in no captious, cynical frame of mind that the question of a possible increase among the dementing psychoses is raised. Genuine scientific interest to know the truth prompts the query rather than a pessimistic spirit that finds in modern psychiatry only a fatalistic trend.

Eliminating the greater longevity of the insane, due to their better care; disregarding the diminished popular prejudice against hospitals for the insane and the consequent accumulation of this class in institutions; making all due allowance for the better statistical recording of the insane now than in years past, still we are confronted with the assertion that insanity is increasing at a more rapid ratio than the population. In what variety of insanity does this inferred increase occur? Is any one type of insanity more prevalent than formerly? Has the character of mental disease changed, or have our methods of study and diagnosis led to a different interpretation? Have a more intensive scientific research, a clearer conception of the psychogenetic causes of insanity operating through constitutionally predisposed or weakened nerve structure modified our conclusions? Under the same conditions as eighty years ago, and disregarding any increase in population, do we find an actual increase among the dementing psychoses, or did the alienist of the forties and fifties of the previous century fail to read aright the symptoms? Do

we, observing identically the same symptoms as did our predecessors, interpret them differently?

Our evaluation of the diagnostic importance of symptoms has unquestionably experienced a radical change. We no longer place any significance on excitement, exhilaration, depression, confusion, stuporose states, and many other symptoms *per se*, for we know that all these manifestations may characterize any of the phases of mental disease. These phenomena appear and disappear in nearly every phase of insanity, and by themselves possess no great diagnostic value. We must look further than the mere superficial signs. We must dig down deep into the patient's mind, into the psychic life, not only of the patient, but of his antecedents, before pronouncing their true significance. We must discover why individuals react so differently to the same environment—why one man breaks down mentally under stress and another passes through the same ordeal unscathed; why one man's mental integrity at ninety is unimpaired and another's mind gives way at fifty-five or sixty. If from some deep hidden psychogenetic process one man has hallucinations of special sense, we must, if we can, ascertain why this special psychogenetic cause operates as it does in this particular case. Is it because of a certain inherited constitutional make-up, some acquired mental state due to environmental conditions, a toxæmia or other factor? Such investigation may lead to widely varying interpretations of symptoms, the significance of which will depend largely on the nature of the cause, the character of the subsequent morbid process, and more important than all else the inherited predisposition of the individual.

The alienists of fifty years ago undoubtedly made more hopeful prognoses than their successors of the present day. They laid more emphasis on the so-called exciting causes, and placed less importance on the predisposing factors. The tendency of the earlier psychiatrists was to exaggerate the significance of single symptoms. They were very apt to make a diagnosis or prognosis on one symptom, such as depression or excitement, when really these emotional disturbances were only a part of a larger process and not therefore a symptom complex of a disease entity. They were especially narrow in their interpretation of causative influences. Too much emphasis was placed on a single cause to the

exclusion of other factors. This led to a somewhat circumscribed conception of the case. By removal of an apparently conspicuous etiological factor the earlier alienists believed that the patient would recover. If the patient had been a too-ardent Millerite, spiritualist, if he had confined himself too closely to mental or physical work, by a simple withdrawal from these baneful activities it was felt that recovery would surely follow. In reading the reports of these earlier days one is led to the conclusion that not enough emphasis was laid on the constitutional element. One would like to know whether the patient would have had his mental disturbance at all if there had not existed some marked constitutional dyscrasia which predetermined the psychosis. Lugaro's statement that the healthy brain is the most resistive organ in the body; that it will endure more pressure and strain than any other tissue and still retain its recuperative vitality, is undoubtedly correct. Over strain is only likely to induce insanity in a brain predisposed by poor inheritance to feeble resistance.

It would be interesting to know if these so-called recoveries were genuine recoveries; whether these same patients did not suffer relapses and finally become permanently insane. In these earlier days there were genuine recoveries as now, but the asylum reports of that time breathe a hopefulness that we of the present day cannot experience, much as we might desire. Unquestionably modern methods and a change in the psychopathological view point have resulted in classifying many cases among the dementing psychoses that in earlier days would have met with more hopeful consideration.

The statistical tables of the earlier days were very simple affairs, and in reading them one almost envies the apparent ease with which they must have been made. Mania, melancholia, dementia, an occasional hypochondria and hysteria composed the diagnostic tables. Of these mania and melancholia constituted the larger number, while cases called dementia were in the minority. The query arises whether the physician of that day did not include among the manias and melancholias many cases that at the present time would be classified as dementing psychoses. Paresis never appeared in the diagnostic tables. This disease, in the rural districts particularly, must have been extremely

rare. Syphilis as an etiological factor in brain disease was rarely recognized. Indeed, it is very doubtful whether syphilis was as prevalent then as now. Even alcoholism did not appear as a prominent etiological factor. Arteriosclerosis was unknown, and therefore never mentioned.

We must remember that state supervision did not exist at that period; that many of the insane, the epileptic and feeble-minded were cared for at home or allowed to roam at large and consequently were unrecorded. These facts may account for the smaller number of so-called dementias and incurable cases occurring in the earlier reports. But making due allowance for the fact that many cases were not committed to asylums, one cannot escape the conviction that the diagnostic methods of the earlier period lacked scientific precision and were far less accurate than those of the present day, and that for this reason the statistical tables recording diagnoses were to a certain extent misleading.

It is true that the earlier psychiatrists may have frequently erred in their diagnoses and included many dementing psychoses among their manias and melancholias. Giving due credit for such errors in diagnosis, the large number of incurable and dementing psychoses in the statistical tables of the present day is strong presumptive evidence that there is an actual and not a fancied increase among this class of mental diseases. The recoverable and functional psychoses have practically become narrowed down to two groups: manic depressive insanity and infective psychoses.

Among the dementing psychoses an apparent increase occurs in the following forms: paresias, dementia præcox, the various imbecilities, and the presenile and senile dementias. That there is an increase in paresis few will probably deny. Kraepelin says: "A certain increase of paresis may be admitted as highly probable. The experience, especially of large cities, proves this. There the figures are so large and so continually growing, as for instance, the rate of Berlin and Munich, where the male paretics amount to 36 per cent, and in the Charité at Berlin where they reach 45 per cent, that the errors just mentioned are of little consequence. There are twice as many paretics in the city asylums as in those of the country districts. This fact, considering the rapid growth of the city population, makes an increase of parietic affections more probable." Kraepelin's sta-

tistics are confirmed by those of this country, although possibly not to the same extent as in Germany. Recent serological and cytological findings positively connect syphilis with paresis. No longer can there be any etiological uncertainty concerning paresis. Kraepelin affirms: "We can, therefore, to-day with greatest certainty declare that syphilitic infection is an essential for the later appearance of paresis."

The increase of paresis in a general way must mean an increasing prevalence of syphilitic infection in the community. While the larger percentage of paresis occurs in the cities, there is a striking increase in rural districts. In New Hampshire, an agricultural state, whose largest insane population comes from the country, there has been in the state hospital a slow but steady increase of paresis among the commitments. In the Bangor State Hospital, which draws many of its insane from the coast communities, there is a striking prevalence and increase of paresis. In New York State the proportion of paresis to all other forms of insanity is one to eight; in Iowa one to fifteen, which is a marked increase above the proportion of former years. The spread of syphilitic infection becomes therefore a serious contributory factor in the causation of mental disease. Not that every luetic infection entails paresis, but such infection does, if not removed, certainly lower the resistive tone of nerve tissue and so lay the foundation for individual and family deterioration.

Syphilis undoubtedly plays a prominent role among the obscurer causes of insanity. In paresis its influence represents the ten to fifteen-year invasion of the central nervous system after the original infection. Whether this increase of paresis is enhanced by a weakening of nerve structure through alcoholic excesses or the stress of civilization, may be a mooted point. That there is an increase of paresis among the most highly civilized races there can be no doubt. It is quite probable that with the spread of syphilis in the community this disease may be fast becoming one of the chief contributory factors in a variety of dementing psychoses, such as dementia præcox, imbecility, epilepsy, the senile and the presenile insanities. These psychoses occur in brains of feeble resistance and possibly demonstrable convolitional brain simplicity. That syphilis may be one of the important causes of weakened durability of brain tissue in infected individuals and their descendants is extremely probable.

Misdirected sexual activity in youth may therefore become the initial cause of family brain deterioration in subsequent generations. It is of course extremely difficult to demonstrate this statistically, but of the possibility there can be no doubt. Intelligent field work may render possible such demonstration, and disclose at what point family decline began in this or that genealogical tree through the introduction of the syphilitic infection. Every psychiatrist is familiar with individual cases of this character. Such cases may be more numerous than we are aware.

The increasing prevalence of syphilis is receiving deserved recognition in the medical journals of the day. The *Boston Medical and Surgical Journal*, in a timely editorial in the August 31, 1913, issue quotes from a letter in the *London Morning Post* emanating from several eminent medical men condemning the "conspiracy of silence as regards venereal diseases" and recommending the appointment of a Royal Commission "to investigate the facts and to recommend what steps, prophylactic and therapeutic, should be taken to cope with these diseases." The last report of the Massachusetts State Board of Insanity, under the section, "After Effects of Acute Diseases of the Nervous System," makes the following interesting and pertinent statement:

The correlation of Danvers material by Dr. H. I. Paine, of the Danvers staff, had previously shown that the routine of Essex County cases was running over 20 per cent positive sera by the Wassermann test. Of course this percentage was far from showing that all the mental phenomena in these positive cases could be traced to syphilis. Moreover, the Danvers material included general paresis cases in which the relation to syphilis was already clear. It became desirable to learn what amount of residual syphilis could be traced in asylum (*i. e.*, technically, in Massachusetts chronic "transfer") cases. An extensive inquiry gave about 5 per cent positive sera in Worcester Asylum material, to which we had access by courtesy of Dr. H. L. Stick. The more general application of Wassermann tests on admission of our patients is indicated both by the Danvers and Worcester series, but also by the general Boston admissions which at times run as high as 30 per cent positive sera. Important therapeutic work is suggested by these results; for, if the Wassermann positive serum indicates in some sense active syphilis, the condition would seem to demand therapeutic attention for the possible amelioration, if not the cure, of certain mental sequelæ of syphilis.

And again in the same report:

Doubtless the percentage of syphilis demonstrable in asylum material may rarely run over 10 per cent, but the acute material of the active hospitals

may yield a percentage somewhere between 20 and 30 under the present conditions of society. Certain leads in therapy are thereby indicated.

We may conclude that paresis is a dementing psychosis which is exhibiting a marked increase at the present time; that the cause of paresis, syphilis, may be one of the prominent contributory factors in a large number of dementing psychoses that are *apparently* increasing more rapidly than the recoverable psychoses.

While an increase in paresis is demonstrably certain, the same query as applied to dementia præcox presents a problem more difficult of solution. One chief reason for such difficulty lies in the fact that there is not a definite consensus of opinion as to the exact pathology of this disease. Some think that dementia præcox is of psychogenetic origin; others that the psychosis has an organic basis; still others that the name is a misnomer; that the disease is not necessarily limited to the developmental period of life, but is merely a dementing process that may occur in predisposed individuals at almost any age period; and finally there is the supposition of Kraepelin that the disease is of toxic origin. Until there is greater unanimity of opinion as to what is actually meant by the term dementia præcox; until the various theories of alienists shall have crystallized into a more permanent and universally accepted belief, it will be extremely difficult, if not impossible, to say definitely whether this psychosis is really increasing. Numerically dementia præcox has of late occupied an increasingly prominent place in statistical tables. There is fashion in diagnosis as in everything else. We are too near the advent of dementia præcox on the diagnostic horizon to subscribe unreservedly to the correctness of the diagnosis wherever made. The charge has been brought that this diagnosis offers an easy method of disposing of uncertain cases in the diagnostic tables toward the end of the hospital year. However this may all be, there is evidence that greater caution is being exercised in making the diagnosis. Even Kraepelin has receded somewhat from the more positive position held by him when he first described the psychosis. Hospital reports during the next few years will doubtless show a decrease in the number of dementia præcox cases.

The extension of the age limit at which this disease may occur discloses a modification of our original conception concerning it.



Formerly dementia præcox was identified with adolescence. At the present we are not surprised to meet with cases in the third decade presenting the characteristic symptoms of the disease which originally were limited to the periods of puberty and adolescence. Age limit is no longer regarded such an essential factor in the diagnosis. While theoretically retardation and negativism may be pathognomonic of the depressed phase of manic depressive insanity and of dementia præcox respectively, yet practically they are oftentimes so nearly identical and merge into one another so easily that a positive diagnosis of either psychosis cannot be definitely made on these symptoms alone. Automatic negativism, following either a perversion or a paralysis of the will, may occur as readily in a functional melancholia as in a dementing psychosis with a presumable organic basis. In former days the diagnosis of stuporose melancholia with marked negativism did not prevent the psychiatrist from venturing a hopeful prognosis. When dementia præcox became the fashion stuporose melancholia was relegated to the background, and a gloomy prognosis followed. The alienist of former days, his mind intent on a functional disease process, was not surprised at recovery after a year of stupor. During the last decade, however, the hospital physician, dominated by a name and feeling that the symptoms of dementia præcox rested on an organic basis, rendered an unfavorable prognosis. Not infrequently he has been chagrined and surprised to meet with a recovery in what he had supposed was an incurable psychosis. The meaning attached to a name may become an actual obsession; in this way the generic word *dementia* leads frequently to the abandonment of a hopeful prognosis, and the specific title *præcox*, by postulating an age period, prevents the making the diagnosis when it should be made. While the name may be unfortunate, in that it does not always meet all the facts, still the particular disease process which it connotes does exist and the demarcating the pathological symptomatology of *dementia præcox* constitutes one of the most brilliant advances in mental science. It is evident that the diagnosis of dementia præcox should not be made too hastily. Decision should be suspended in doubtful cases sufficiently long to convince the physician that the disease process is something more than a temporary disturbance of brain function. It is

quite probable that when judgment is thus deferred dementia præcox will not appear as frequently in our diagnostic tables during the next ten as it has during the past ten years.

The statistical tables of recent hospital reports disclose marked variation in the preponderance of dementia præcox in different institutions. So great is this variation that one questions the accuracy of the diagnosis, and wonders whether the mood of the diagnostician is not reflected in the result. In some hospitals dementia præcox and manic depressive insanity appear in nearly equal ratio, while in other hospitals the præcox cases are twice as numerous as the manic depressives. Thus:

Hospital.	Year.	Aggregate admitted.	Manic depressive.	Præcox.
Westborough State Hospital, Mass...	1910	491	120	121
Westborough State Hospital, Mass...	1912	494	115	124
Worcester State Hospital, Mass.....	1910	568	72	194
Worcester State Hospital, Mass.....	1912	486	77	145
Danvers State Hospital, Mass.....	1911	573	73	150
Danvers State Hospital, Mass.....	1912	505	92	99
Northampton State Hospital, Mass....	1910	330	56	66
Northampton State Hospital, Mass....	1912	334	57	64
Boston State Hospital, Mass.....	1911	433	78	71
Boston State Hospital, Mass.....	1912	651	108	97
Taunton State Hospital, Mass.....	1911	408	37	106
Taunton State Hospital, Mass.....	1912	520	48	172
Bangor State Hospital, Me.....	1912	183	23	28
Augusta State Hospital, Me.....	1912	270	55	45
New Hampshire State Hospital, N. H.	1911	301	56	42
New Hampshire State Hospital, N. H.	1912	327	65	52

In New York State the per cent distribution of manic depressive insanity and dementia præcox in all hospitals was in

1911 manic depressive, 11.2; dementia præcox, 16.0

1912 manic depressive, 11.5; dementia præcox, 16.0

In the Boston, Augusta, and New Hampshire State hospitals there were fewer præcox cases; in all other hospitals cited the præcox cases exceeded the manic depressive, and in some cases the excess was over 30 per cent. The statistical variations are of such wide range as to render definite interpretation quite impossible.

The very interesting psychogenetic studies of Meyer, Jung, and Bleuler on the one hand, and the proposed anatomical inves-

tigations of Southard should prove most illuminating, and ought to contribute materially to our understanding of this disease. In this connection the following statement by Southard in the last report of the Massachusetts State Board of Insanity is interesting:

Work under way deals further with the dementia præcox problem in the endeavor to settle, from the convolucional standpoint, whether the victims of dementia præcox start with normally developed brains at birth. Publications are in preparation which deal with this work.

In a timely paper by Dr. George H. Kirby, entitled *The Catatonic Syndrome and Its Relation to Manic Depressive Insanity*, published in the *Journal of Nervous and Mental Disease* for November, 1913, the possibility of the occurrence of the catatonic syndrome in functional and recoverable mental disease has been ably and convincingly stated. Dr. Kirby logically draws the following conclusions: "From the point of view of formal symptomatology we find that very similar clinical pictures occur in deteriorating and non-deteriorating cases, and that in all cases the most reliable prognostic data are gained from a study of the personality and the mode of development of the psychoses." And again: "There can be little doubt that Kraepelin over-valued catatonic manifestations as evidence of a deteriorating psychosis, and that many of these cases have served to swell unduly the dementia præcox group." Dr. Kirby cites a number of cases in which stupor, catatonia, and negativism were prominent symptoms for long periods of time and eventually recovered, "in some instances after a duration of several years."

Whether there has been an actual increase among the dementing psychoses of early and middle life is very uncertain. Statistics imply such increase. The conclusion is not necessarily proven. The fact that cases can be so readily transferred from the non-deteriorating to the deteriorating column, according to the view point of the diagnostician, invalidates any opinion drawn from statistics. An actual increase of true dementia præcox throughout the country would mean a condition of serious import. True dementia præcox undoubtedly represents a weakening of the family stock. As such it may depend upon a variety of causes: alcoholism, constitutional diseases of various sorts in the antecedents, anything, in fact, that lowers the resisting power

of the nervous system. Dementia præcox is not consistent with a strong, virile family or racial stock. The writer inclines to the more hopeful conclusion that the larger statistical increase in dementia præcox is due rather to a change in the view point of the diagnostician than to any large numerical increase in the disease itself. Such conclusion should stimulate the psychiatrist to a more careful and hopeful study of all apparently dementing psychoses occurring in early life. Such dementing processes in adult periods are more serious and suggest impaired durability of brain tissue. That there is any real increase in this psychosis over what might be expected from the natural increase in population is doubtful.

There is one fertile recruiting ground for dementia præcox demanding most thoughtful consideration, the ignoring of which may lead to disastrous results. Young immigrants, with poor hereditary and environmental antecedents, easily become victims to this psychosis. The adolescent recently arrived from southeastern Europe, without education, with possibly an hereditary handicap, suddenly finds himself in a strange land, confronted with new customs, different food, and compelled to get a living out of unfamiliar and to him anomalous conditions. Most likely he is placed in an unsanitary city environment. His already weak mind readily succumbs under the strain. From the ranks of the predisposed immigrants will in all probability come a large increment of dementia præcox. In years past the Irish immigrants have furnished the most noticeable recruiting ground for this psychosis. Their place has been taken by the French Canadian and the races of southeastern Europe. Prophylaxis should demand more rigid mental inspection of immigrants, preferably at their ports of embarkation. A large increase in dementia præcox during the next few years will in all probability proceed from imported stock. The strong and mentally well-endowed immigrant, even though he be uneducated, is welcomed and assimilated. The weaklings should be rigidly excluded, preferably before they leave their native land.

Whether the dementing psychoses are increasing in the fourth, fifth and sixth decades is largely problematical. Judging from statistical tables, diagnostic methods seem to be undergoing a transition. Involutional melancholia, presenile insanity, Alz-

heimer's disease, and senile insanity are terms that seem to connote varied phases of dementia occurring at any time after the beginning of the fourth decade. Cases may occur during this age period presenting manic depressive symptoms that do recover. The majority of these cases, it must be admitted, do not recover and the query arises whether the pathological etiology is not the same in all. An apparent increase in these dementias follows from the fact that persons becoming demented after fifty years of age are very apt to become permanent residents of institutions, and relatives are much more willing to commit family members who become incapacitated at this age than formerly. A somewhat changed point of view has led to the placing of a larger number of cases occurring in the fourth, fifth, and sixth decades in the column of the dementing psychoses. All these factors contribute toward an apparent increase among the dementing psychoses occurring after forty years of age. It is doubtful whether fundamental conditions have changed. Probably the increase is more apparent than real, due to different pathological interpretation and diminished popular prejudice against institutional treatment.

In this connection it is interesting to note that arteriosclerosis is given a less prominent part than formerly as a causative factor in the insanities of advancing years. Reduction in arterial caliber and consequent diminished brain cell nutrition are an easy explanation of senility and senile dementia. Recent studies, however, do not support this contention. Dr. Southard and Dr. Mitchell, in the *American Journal of Insanity*, Vol. 65, October number, conclude that while arteriosclerosis may frequently accompany the insanities of the sixth and seventh decades, still "neither general nor cerebral arteriosclerosis bears an essentially causative relation" to mental attacks in these decades. Is it not more probable that all these insanities occurring in late middle life and old age are but the expression of tissue aging, of failing durability of cerebral cell structure, dependent on fundamental or inherited constitutional limitations?

In a series of able articles in the *Journal of Mental Science*, Vols. 51, 52, 53, 54, Joseph Shaw Bolton presents a broad inclusive picture of all the dementing psychoses, attempting to bring them all under two groups, Amentia and Dementia. The attempt

is made to trace back all the dementing psychoses, both congenital and acquired, to a definite physical basis; in other words, to simplify the nomenclature of mental diseases and unify the disease process by establishing a common pathological background for a widely divergent symptomatology. The proposition is commendable and appeals to a logical mind.

Briefly stated, Dr. Shaw's theory is that all epochal and degenerative insanity has an organic basis. He employs "the term 'dementia' to connote in the widest sense the mental condition of patients who suffer from a permanent psychic disability due to neuronc degeneration following insufficient durability." By amentia he means those cases "suffering from deficient or sub-normally aberrant neuronc development." According to this theory all human beings at birth come under one of two classes: I. Those who are well endowed and have normal resistance; and, II. Those who possess deficient durability of nerve tissue, or an actual defect—an incapacity in nerve structure to develop normally. In either case there is a pathological handicap which sooner or later results in more or less permanent mental instability. As Dr. White so well expresses it: "Every individual born into the world has, if it could be determined, a definite potentiality for development." The durability of a man's nervous system is somewhat analogous to the tensile strength of iron. Just as the tensile strength of a steel plate varies with the molecular resistance of that particular plate, so each man's nervous system has its own durability beyond which it cannot be pressed without danger of disorganization.

It is quite probable that the same histological and pathological processes underlie every form of tissue aging. Dr. Albert M. Barrett, in the 1913 June number of the *Journal of Nervous and Mental Disease*, reports an interesting case of Alzheimer's Disease occurring at an unusually early age. In this case the disease began at 33 years of age, and the patient died at 37. Dr. Barrett calls attention to the histological similarity between Alzheimer's Disease, usually considered a disease of the presenile period, and the brain changes in senile dementia, and raises the interesting query whether the limits of presenility may be extended forward to include this case as well as onward to the truly senile cases.

In the following language Dr. Barrett suggests histological and pathological identity underlying all these cases:

The circumstance that there seems to be no difference in the character of the plaques and neurofibril alterations between these presenile and the truly senile cases, excepting in the intensity of the process, and that there also occur in each similar changes in the neuroglia of the marginal layer, and the accumulation of lipoid substances in the nerve cells, glia cells and blood vessels has led to the explanation that these early cases are prematurely senile, and that senility is not essentially a matter of years but of tissue aging. It has become difficult to limit disease processes by age periods, and Alzheimer comments that anatomical investigation has taught us that progressive paralysis may occur as late as the 70th year and the pathological process of senility as early as the 40th year.

Speculation at the present time as to a probable increase in feeble-mindedness is futile because accurate tabulation of this condition is very recent. In some states careful registration and study of imbecility have only begun. Comparatively a few years ago the feeble-minded were ignored. They either roamed at will in their native communities, or when too great a nuisance were housed, not always permanently, at the town or county almshouses. Within only a few years has segregation of these defectives been seriously advocated. An apparently large statistical increase may occur because feeble-mindedness is better understood than formerly. The higher grades of imbecility were formerly ignored, but are now recognized and classified. In fact, the high grade imbecile is now regarded a far greater menace than the lower grades, for, with his larger intelligence, he moves about more freely in the community and propagates a numerous feeble-minded legitimate or illegitimate progeny. Statistical increase is therefore misleading.

There are some valid reasons for inferring an actual increase. Present-day social conditions are widely different from those of fifty years ago. At that time feeble-mindedness seemed more sporadic than now. Formerly imbecility was more restricted in its distribution and was confined within circumscribed localities in the state. Apparently there were centers of prevalence. The advent of easy transportation facilities by the extension of steam and electric roads has made possible a freer movement of all classes of the population. Isolated rural districts are more readily reached than formerly. The high grade imbecile finds little diffi-

culty in changing his habitat, and presumably does not remain as permanent a resident as formerly in the native home locality. It must be admitted that social conditions favor a readier movement of these defectives from place to place and consequent propagation of their kind. The comparatively recent attempt at stricter segregation of all grades of imbecility, if persevered in, must eventually reduce any increase following freer movements of population, and should ultimately bring about an actual decrease among these defectives. Intelligent curtailment at the source must diminish their numbers. Statistical proof will not be available for a few years at least.

In conclusion, the writer feels that while it is demonstrably certain that paresis has increased during the last twenty-five years, it is by no means equally certain that an actual increase in the other dementing psychoses has occurred. Fundamental conditions are much the same now as they were fifty years ago. With the exception of parasymphilitic brain conditions the actual disparity between the functional diseases of the mind and the dementing psychoses is probably not much greater now than formerly, making due allowance for increase in population. Certain prophylactic endeavor is suggested by this cursory survey. Curtailment of the immigration of mental defectives at the source, restriction of alcoholic indulgence, prevention of syphilitic infection, stricter segregation of the feeble-minded, greater intelligence in entering upon the marriage relation, are some of the steps by which a decrease among the dementing psychoses may be attained.





## A CRITICISM OF PSYCHANALYSIS.

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Let me confess at the outset that my mental attitude, my bias, toward Freudian psychanalysis is not, at the present time and after study and investigation, sympathetic. I have tried to be fair, to listen to all the arguments with an open mind and with a desire to learn some new thing which is really true, but unconsciously as well as consciously, the habits of thought created by inheritance and by training along lines which make one expect to discover truth by the use of the senses, by the microscope and the test tube, and by the clinical study of people and on the facts gathered, basing an explanation by the use of reason, rather than of fancy, makes me tend to be sceptical about the value of the newer psychology.

In order to understand what psychanalysis is, what it is based upon, the method of its application, and its therapeutic value, it is necessary to study the system of psychology of which Dr. Freud is the foremost advocate. I shall, therefore, briefly describe the theories of Dr. Freud and then discuss their therapeutic application. It is somewhat difficult to be brief, because Freud himself is not brief. He nowhere gives a short, clear cut statement of his opinions, and one must read many pages in several books and many papers in order to discover them. He sometimes uses words in an uncommon sense. He does not exhibit the clarity of expression so charmingly manifest in almost all French and a great many English writers, so that sometimes his meaning is obscure. One is impressed by his obscurity, due perhaps to his careless literary style, rather than by the abstruseness of his matter, but his ideas are so unusual that they are well worth the trouble of discovering and the question of the causation and treatment of the psychoneuroses is so important as to be worth a large amount of labor. A large literature has grown up about Freudism, most of which has been contributed by the not numerous, but very enthusiastic, dis-

ciples of its originator. Its opponents have not indulged very largely in writing. Dr. A. A. Brill, of New York, is probably the American protagonist of the school of Freudian thought; at least he seems to be the American who has written most about it. Dr. Ernest Jones, of Toronto, has devoted much time to writing entertaining, though to persons of a thoughtful cast of mind, the much-abused conservatives and reactionaries, somewhat startling papers. The entire pro-Freudian literary output is rather startling to readers who have been trained to expect evidence rather than assertion in papers discussing scientific problems. Dr. Bernard Hart, who does not write as a disciple, has given in "Brain" for January, 1911, a very fair account, scientific in tone and free from bias, of the fundamental ideas of the newer psychology and I have quoted largely from him in the earlier part of this paper. My knowledge as to what constitutes the doctrines of Freudism is based not only on the writings of Freud, but also on those of his followers. There does not seem at the present time to be the unanimity of opinion among the apostles of the school that formerly existed, but there is not time to do more than give Freud's own views. I have tried to do this accurately.

Freud's two fundamental ideas are, first, that mental processes, like all others, are ruled by law; that nothing mental happens from chance; and, second, that they can be explained by scientific laws involving psychological terms only. The second idea makes necessary the assumption of the existence of unconscious mental acts and processes, indeed of an unconscious mind.

The next step in his theory is the doctrine of complexes. A complex is a combination of ideas having a certain emotional and conative trend and possessing energy which can only be discharged by reaching a definite end. The discharge of this energy leads to an end-state of satisfaction. A man may be altogether ignorant of his complexes. If two opposing complexes are actively present at the same time there is, not in a figurative sense, but actually, war between them; in technical terms "a conflict" arises which causes emotional strain. The victim of such a conflict may settle the matter by accepting one complex and disregarding the other, or he may alter both, but sometimes the solution is morbid and results in hysteria or some other psychoneurosis. A person may unconsciously suffer from a conflict of complexes and

know nothing of what is going on in the unconscious mind, but only feel the misery of the results. If the person is conscious of "the conflict" he may avoid it, or try to avoid it, by putting one of the complexes out of his mind, trying to forget or forgetting it. This is called "repression." A repressed complex does not cease to exist but becomes unconscious and may, though unconscious, prevent "satisfaction." There is an assumed active function, "censor," which prevents a complex from coming into consciousness or drives it back into unconsciousness. A censored complex continues to influence consciousness, but indirectly and distortedly. The emotional and conative elements of the complex may separate from the ideas to which they belong, may exist independently, once having arisen, and the energy of the complex is also a separable thing which may be released from the idea to which it originally belonged and attach itself to another.

Conflicts among complexes cause much mental disorder, *e. g.*, hysteria. In a conflict every endeavor is made to avoid the "censor." This is done by: 1, symbolization; 2, condensation, by which is meant that one symptom may represent two or more independent unconscious "wishes"; 3, displacement, which means that the affect properly belonging to one constituent of the complex is attached to some element not under the ban of the "censor"; 4, representation of opposite, *i. e.*, certain elements of the symptom may portray the exact opposite of the corresponding element in the unconscious "wish"; 5, alterations in time sequence, *i. e.*, the sequence of events may be reversed or altered in the hysteric attack.

Conflicts have to do with a "repressed wish." The common "repressed wish" has to do with "libido"; indeed it would seem from the reported dreams that almost all repressed wishes are of the same nature. The common reader would suppose that "libido" connotes sexual in the ordinary meaning of the word, but we are now told it means much more. The most recent American writer (C. C. Wholey, *Journ. Amer. Med. Assoc.*, March 28, 1914, p. 1036) says "it" (the meaning of sexual manifestations) "covers a broad and comprehensive field of experience and activity, whether bodily desires or mental longings. It embraces all desires, instincts, wishes, ambitions, like hunger, sex, acquisition, aspira-

tions, the social sense, love of art etc." Some of us would like to know specifically what the "etc.," includes.

In seeking the cause of psychoneuroses Freud has found the study of dreams of great value. He explains them as follows: They are the expression of repressed wishes. "The censor," active during waking life, is in sleep only strong enough to distort and cause symbolism. As a result dreams have a "manifest content" apparent to consciousness and more or less remembered on waking (the dream as an ordinary man knows it), and a "latent," unconscious content. The latter, the "latent content," is the really important part of the dream, while the "manifest content" is of no value save as being symbolic. The unravelling of the symbolism explains what complexes are causing the conflict. They are the repressed and unconscious, but real, wishes of the patient. Dreams also give the patient a chance to reach a wish fulfilment he cannot obtain in waking life. The dreams of everyone, even those who think they are entirely healthy, indeed are in good health, are to be interpreted in the same way and have the same cause. Inferentially one would conclude that the only useful study of dreams is of their symbolism; that in no other way do they throw light on mental life, and that no other method of studying them is valuable.

One writer at least (Hansell Crenshaw, *New York Med. Journal*, April 11, 1914, p. 733) regards dreams as a beneficent act of nature. He writes: "The dream is an effort on the part of nature to compensate and defend the mind. It is a protector instead of a disturber of sleep. Certain forms of insanity, wherein the persons imagine that they are kings, or even gods, are, like dreams, compensatory mechanisms for those whose burdens have been too galling and too hard to bear. Similarly the seeming fault of forgetting is generally a defense mechanism without which the average mortal would have to endure the tortures of the damned here on earth. Moreover, the day dream, or fantasy, is a wonderful compensation to many a soul." One expects to find in theological treatises and in poetry the personification of nature, but scarcely in scientific papers. It is rather curious that one should be given, by nature, a compensatory mechanism to make him happy after he has had a chancre and in consequence gotten, say, paresis. A really good nature ought to reward the good and not sinners;

that was the old teaching. The doctor is rather too rhetorical and quite too pessimistic about "the tortures of the damned" suffered by the average mortal. Even neurologists, who see a good bit of the painful side of life, are not as pessimistic as this. The paper, however, is interesting as showing the modern trend to mysticism.

We come to psychanalysis proper. Its purpose is to discover repressed complexes. Formerly Freud hypnotized his patients before subjecting them to psychanalysis, but he has abandoned that method. Now he uses first "free association." The patient is ordered to talk freely about everything that comes into his mind. Especially must he tell the things that seem to him trivial and of no importance, because it is the "censor" which makes them appear of no value to him; they may be of vital importance. If he hesitates or refuses to tell something that comes in his mind that something is the clue to the trouble; the "censor" is trying to repress it. The patient having emptied himself of everything he can think of, the doctor proceeds to interpret what he has said.

In addition to this method of "free association," complexes can often be discovered by the so-called association-experiments with words. A prepared list of words, say one hundred, is read to the patient and note made of the first word that comes into his mind after each is read. The time reaction is also noted. Too long time reaction means resistance. The word brought to mind after resistance is also a clue. One writer puts it this way: "Prolonged reaction time, a lack of or a faulty reaction, is a "complex indicator," that is, it indicates that the stimulus word has touched a complex and thus retarded or completely inhibited the reaction." In real life this procedure gives such varying results, dependent upon the differences in emotional makeup of different people, that I do not think it will ever become a usual method of reading the mind. It has been used a little in examining persons accused of crime, not, so far as I know, by district attorneys and such commonplace people, but by learned amateur criminologists. Experience has shown that the well-seasoned criminal answers well and rightly and quickly. The scared innocent convicts himself.

Acts may be symbolic. Thus a woman patient of mine had convulsive tic with the explosive utterance of an obscene word accompanied by spitting. A psychanalyst acquaintance of mine who knew nothing of the patient save what is stated above, and

what he could learn by looking at her, explained the spitting as symbolic of emptying the mouth after a certain act and further affirmed that the woman undoubtedly had indulged in this practice. I have every reason to believe, not from what the patient stated, because I saw no reason to discuss the matter with her, but from other sources of information, that the gentleman's conclusions were entirely erroneous. The case, however, illustrates the method of interpretation of acts as symbolic and shows its value. I was very much, and not altogether favorably, impressed by the cock-suredness with which the gentleman spoke and the positiveness with which he drew a conclusion from fanciful evidence.

Finally the patient relates his or her dreams and they are also interpreted by symbolism. The method of interpretation is shown by the following examples. Freud relates this one: A woman dreamed she was having her menses. The meaning was the menses had stopped; she would have liked to have enjoyed her freedom longer before the discomforts of motherhood began. Another woman dreamed she saw milk stains on the bosom of her waist. It was an indication of pregnancy; the young mother wished to have more nourishment for the second than she had for the first child; hence the dream. There is not much symbolism in either of these, but the first illustrates the theory that the "wish" may show itself in the dream either positively or negatively; in other words, the newest science confirms the truth of folklore in believing that dreams may go by contraries. Symbolism raised to the Nth. power is shown in the following dream recorded by Dr. A. A. Brill ("Psychanalysis," p. 87): A woman dreamed she walked on the street and a horse harnessed to a wagon was running toward her. She could not get out of the way; the horse was almost upon her. She put out her hand to push it away, when it caught her hand in its mouth and bit her. Screaming, she awoke terrified. Such was the dream and it occurred just before or at the onset of an attack of anxiety hysteria, and as "dreams are always based on experiences or thoughts of the day preceding the dream," Dr. A. A. Brill assumed that dream and attack had some relation. Further, the doctor states that "the fear in the dream pointed to its being of a sexual nature and I suspected that the horse was simply a sexual symbol." On further examination she said that her first conscious sexual impression was from seeing

horses, though of course she was too young to know the real meaning of things and thought the horses were fighting. There was at this stage of the examination a sudden "blocking" and when asked to continue she recalled something which had nothing to do with horses. The evening before the dream some little animal ran out of the brick stove into the bed. Though usually not afraid of mice or rats, this time she was terribly frightened for hours. She hunted through the bed, found nothing, but was afraid to sleep in it. This recalled that the fright occurred a few hours after unsuccessfully trying to sell her feather beds. She again became silent and claimed her "stream of thought" was exhausted. The doctor suspected "her attack of fear was the manifestation of a mental conflict in a sexual abstainer." He asked her why the rat or mouse frightened her. She said she was not afraid of the real thing, but imagined they were apparitions; that someone had tried to exert an evil influence over her by magic, but she no longer believed such nonsense. Asked who exerted the evil influence, she at first refused to answer, saying the whole thing was not worth talking about. Later she said it was the man who offered to buy the bed. She described the man (X) as a disagreeable, impudent fellow, who persisted in calling on her until she hid herself when he came. She suddenly broke off and became indignant, saying it was foolish to revive such things. The doctor told her he was sure she was concealing something and that he believed she had some affair with X. She denied it indignantly, but returned two days later and confessed. The horse symbolized X. Its being almost upon her, had a sexual significance. Is comment necessary?

Dr. A. A. Brill (N. Y. Med. Journ., March 21, 1914) also relates the following dream: "A woman was at a menagerie with a little niece. The animals all came out of their cages. She was greatly frightened. She saw a stairway, which she went up with great trouble. All the doors at the top were locked." She awoke. He gives this analysis. The patient suffered from hysteria and had a terrible disgust for sex. The niece typified purity, innocence, maidenhood. The wild animals signified the animal passions that were pursuing her. The great effort to reach the top of the stairs signified the acceptance of normal sex without running away. "The whole act symbolizes coitus." "The several closed doors



which she could not open signify the many opportunities to marry which she let slip." This was published by a physician in the twentieth century and in America, not in the ages of witchcraft, nor in the heart of Africa.

Dr. Hansell Crenshaw (N. Y. Med. Journ., April 11, 1914) publishes the following dream: "A vigorous young lady dreamt that a ferocious lion chased her up one side of a mountain and down the other." The doctor discovered, not from the dream, that "the lady was engaged to marry an elderly gentleman of considerable wealth. Her family encouraged the match, and while the young woman herself thought well of the alliance, nevertheless she postponed it once or twice. Deep down in her heart she desired to be courted, pursued, by a more virile, more animal lover than the lamb-like old millionaire to whom she was betrothed. In a word she wished something more leonine." The doctor therefore interpreted the dream thus: "The lion personated the lacking attributes of her aged fiance. The mountain in this dream, too, had a sexual significance," the doctor continues, "if we are to believe with Freud that a wooded mountain is symbolic of the *mons veneris* and that climbing in dreams symbolizes sexual activity." Much more astounding than this, to my poor mind, is the doctor's reference to a young widow who had five possible chances of marriage and who dreamed of coming upon five snake-holes, from each of which protruded the head of a snake. Curiously enough, however, only one of the serpents came out and pursued the widow. What will the readers of the thirtieth century think of the writers of the twentieth? Fortunately wood pulp paper has no enduring qualities.

The purpose of the psychanalysis of any given invalid is to discover some unpleasant, painful, or shameful event in the past history of the patient, because the event, or rather the memory of it in the unconscious mind, is the thing which is causing the conflict. When it is brought into conscious life and the patient is shown what really is the matter with him, then he, or more frequently she, is cured. It would seem to an outsider that this is a very complex way of doing a very simple thing. One does not need dreams, and free association, and blocking of word association to find out these matters. One does not need any such things at all. Honest confession is often good for the soul, and misunder-

standing and ignorance about the physiology of sex leads, especially in adolescents, to much ill health, but there is not needed for its cure such performances as are described above and the trouble, when present, resides not in the unconscious mind, but in a very remembering and conscious mind.

Freud's idea that mental processes are ruled by law will be accepted by many of us; indeed it is no new thing, but came into the world as soon as the idea of natural law was first thought of and has been battled over ever since. When, however, he adds to that the idea that such laws of mental action can be explained by psychological terms only, there arises in the minds of some a feeling of resistance, of antipathy; a feeling that he is getting into a very fanciful realm. Those of us who are inclined to the view that there is always a physical cause for a mental act, and a perversion of physical function whenever there is a perversion of mental acts, want proof before we will accept his opinions. Now, Freud nowhere gives any proof of his dogmas. He states that certain things are true, but he does not give any evidence of their truth, unless indeed there is the pragmatic sanction that, since patients are cured by his method, his psychology must be true. It may be true pragmatically, but the question is, is it true really? Again, it is claimed that the accuracy of the interpretation of dreams proves its verity, but of this I shall speak later.

Freud emphasizes very much the importance of the unconscious mind. Now, no one doubts that the way to remember a forgotten word is to forget all about it; no one doubts that it is well, to use a popular phrase, to sleep over a question requiring much thought before making a decision, though we do not all believe that an unconscious mind is wrestling with the problem; but Freud's unconscious mind is much more than, and very different from, this. An incident in childhood long forgotten and entirely out of conscious life is really there, according to him, and acting all the time, and may in mature life start a conflict among complexes which wrecks the mind. A woman without knowing it may be in love with a man whom she consciously knows she does not even fancy. Now, the feminine mind is mysterious to mere man, and is getting more so, and love and hate are in a sense not far apart, but it is rather difficult for some of us to accept Freud's notion of unconscious mind as correct.

When we come to complexes and conflicts between them and a "censor" which controls them, we are getting into very deep waters. When we are told that these complexes have independent energy and that the discharge of this energy gives pleasure we are far over the heads of many people. To some it would seem that instead of being so far over our heads the writers were merely playing with words rather than attempting a real explanation; or it might be thought they were speaking figuratively. They say they are not. Of course it is true that a man's mental bias depends upon past experiences as well as upon his heredity and training. A man's type varies as these vary. In other words, the way a man will look at certain things, the way he will react under certain conditions, depends upon his bias, and bias is the unconscious effect of old memories, training, and inheritances; but that certain ideas are grouped in complexes, that they themselves are ever present, and not only their results, is not proven or even rendered probable anywhere in the writings of Freud or anyone else. I cannot understand how a mental thing of which we are, by definition, unconscious can influence conscious life. I can, *e. g.*, understand how a boy can be in love without knowing what is the matter with him; most adolescents have the experience (it has a well-known underlying physical cause), but I cannot understand how a child's emotional feeling toward a grown person can, entirely unconsciously, be carried on into adult life and create a repressed wish, he not knowing he is repressing or wishing anything, and hence lead to mental disorder. I cannot take seriously the statement that the affection of a little child for one of its own sex is really a manifestation of homosexual love, nor if such a thing be normal in children, as is claimed, can I see how or why a normal event should, years after, cause a sexual conflict and hence a sexual neuropsychosis. Normal things should not have pathological results. I confess I am not willing to accept the symbolical interpretation of a dream as proof.

As to dreams: According to Freud almost all dreams are sexual. In all there is a struggle to get satisfaction for a repressed wish. He proves this by interpreting all dreams symbolically and the sexual act is symbolized by almost everything, *e. g.*, a bald head, a dagger, an umbrella, a toadstool, the toe, a fireplace (vagina), a horse, bulls, dogs, cats, chickens, a steeple, an aspar-

agus stalk, a wooded mountain, climbing, snakes, getting wet by rain, water, the lock and key, and finally any elongated object of any sort. Writers state: "All animals in dreams are usually sexual symbols" and fear also; all of these things and more have a sexual significance. Now, if you start out with the premise that everything symbolizes some one thing, that one thing is going to be the meaning of every dream and it would be very difficult for anyone to have a dream in which one at least of the orthodox Freudian sexual symbols does not occur. I confess ignorance as to how it was discovered, in the first place, that the things catalogued above are sexual symbols. One is inclined to suspect as much power of symbolizing in the interpreter of dreams as in the dreamer; perhaps even a little more.

What sort of diseases are suitable for psychanalytic treatment? Freud states its use is limited. The patient must have a certain degree of education and his character must be reliable. Only those who are prompted by their sufferings to seek treatment can be aided. Those who subject themselves to it by order of relatives are unfitted. Psychoses, confusional, and marked toxic depressions are unsuitable. Later it may be possible to disregard these contraindications, but not now. Persons near or over fifty are not psychically plastic enough—not educable. Youthful persons, even before puberty, make excellent subjects. Psychoanalysis should not be attempted when it is a question of rapidly removing a threatening manifestation, such as hysteric anorexia. These are Freud's own statements.

Dr. A. A. Brill always begins treatment with an investigation of the patient's dream life, but first he occupies two weeks with getting acquainted with the patient. He further states that it is not wise to "analyze relatives" (I do not think he tells us why) and advises; "In private practice do not analyze any patient without receiving some compensation for it" ("Psychoanalysis," p. 6). Surely the laborer is worthy of his hire.

A word about the sexual element in psychoanalysis: When anyone now accuses the disciples of the newer psychology of laying greater stress on sexual matters as a cause of mental trouble than they deserve, the word "libido" is claimed to be used symbolically. But on reading the interpretation of the dreams reported in books and papers one finds "libido" is used in its common,

ordinary, everyday meaning. The words and phrases symbolic of "libido" quoted above, from printed dreams, were symbolic of the sexual act and desire and in no instance were they symbolic of social sense, love of art, hunger, or anything else. I refuse to make charges of bad faith, but I do not think the disciples of Freudism are altogether frank in their statements as to their use of the word. I think their enthusiasm has made them a little disingenuous. The present explanation was not given till adverse criticism had been made. Almost all the dreams I have read have been interpreted by the writers of the books or papers in terms of ordinary sexual desire, sometimes normal, sometimes perverted.

A very great objection to psychanalytic treatment is this stress laid on sexual matters. No good can come from keeping the mind of a patient wrought up on such things for months at a time and the treatment may, as we are told, need to be carried on over a period of two years. Dr. A. A. Brill seems to think that there may even be danger to the moral sense of the practitioner of the art. He writes: "Only those who are themselves free from all sexual resistance and who can discuss sex in a pure-minded manner should do psychanalytic work." Anyone who has studied hysterical women will soon learn, unless he be obsessed, that so far from continually talking sex matters with them doing them good, it does them distinct harm. I have seen more than one young woman much injured by ideas put into her head as the result of the interpretation of dreams. I have seen more than one sensitive youth, who needed the wisest care and the most conservative handling, frightened into believing, or at least fearing, he was a congenital pervert. Further than this, the whole matter is of such a character that men of evil minds can use it for evil purposes much in the same way that pretence of hypnotism has been used by vicious men to mislead and lead into error, even into vice, psychoneurotic women. Of course it may be replied that on the same grounds poisons should not be used therapeutically, because men murder with them; but poisons have a use.

The danger is greatly increased by the fact that the treatment is no longer to be confined to physicians, and only recently a German has published a book the avowed purpose of which is to instruct teachers and clergymen how to practice the art. Need one ask if such a thing is wise? We have seen in recent years the

injury that has come from amateur treatment of mental diseases by religious systems. Can we expect good to come from psychoanalysis in the hands of the general public? Will it be wise for an interesting and spiritual-looking young curate to discuss the sexual symbolism of dreams with girls rather susceptible to human passions? Would it not endanger his own welfare to do it with a woman who had reached the dangerous age? Might it not really lead to harm, the personal feeling becoming stronger than the scientific?

The relation of will to memory is an important element in Freudism. Forgetting is, according to Freud, an act of the will. We forget, in his opinion, what is painful to us. We push it back into the unconscious, but it still acts. This is surely contrary to the experience of most people; with most of us painful things are the very ones which stick in consciousness; they obtrude themselves at the most inopportune times.

Psychic insult is, according to Freud, the large cause of certain mental disorders. Much, however, can be said against the psychic origin of mental troubles, though of course stress and strain act as mere exciting causes. Certainly it is not the people who are subjected to the greatest mental and emotional strain who succumb; it is those who are inherently weak. Everyone who reaches middle life, and many even in childhood, suffer many psychic strains and stresses, but very few become psychoneurotic. Clinicians know that often the most protected, those who have suffered least, are the first to break. This is particularly true in insanity, and in all mental disorders many acts and thoughts popularly supposed to be the cause of disease are really symptoms of it. Thus the sexually perverted are not perverted because they do certain things; they do certain things because they are perverted. It is not unusual for a patient's illness to be attributed to alcohol, when the excessive drinking was really a result of disease. In the minor mental diseases with which Freudism largely concerns itself, psychoanalysis being confessedly of little or no value and impossible to carry out in the true insanities, it is really, just as in insanity, the essential nature of the man, rather than the stresses and strains he has been subjected to, which is important. Thus it is common when a boy or girl breaks to say, out of kindness, that it was the stress of over-work at school or too much practicing of

music that caused the mental trouble, but everyone who has investigated the matter knows that public school work is carefully arranged so that a very ordinary boy or girl can accomplish it and that it is the weakness of the person and not the greatness of the stress which causes the breakdown. We are continually talking about the strenuousness of modern life. There is a great deal of humbug about this. The labor union worker is not, so far as work is concerned, under great stress with his eight-hour day and the strictly limited amount of work he is permitted to do. The savage man is under much greater stress; he must get food or die. The modern is cared for if he is not able to take care of himself and he is rapidly realizing more and more that the state is his father and his mother and his wet nurse and that he need not worry. We hear much of family trouble as the cause of mental breakdown, but the people who marry the men or women who are going to cause trouble are very often themselves biologically degenerate. There is something in degenerates that attracts the affection of other degenerates and we often assume a person is strained by something because it would shock us. Not infrequently it is to them no strain. The normal person can and does withstand all the stress and strain of life without mental breakdown. Of course the strains and stresses I am speaking of are conscious, but the argument holds for the unconscious. Really it would seem that more progress in discovering the cause of the psychoneuroses would result from a study of heredity and human chemistry and physiology and pathology than from the fanciful interpretation of hysterics' dreams.

One trouble in bringing dreams into a system of philosophy, and we are told that Freudism has attained the dignity of being a philosophic school, that it has to do not only with disease, but with the explanation of folklore, and fairy tales, and education and questions of social policy and the rights and duties of man, is that we are entirely at the mercy of the veracity of the dreamer. I know of several instances in which impish, but brilliant, hysteric women have played with psychoanalysts and made up dreams. One gentleman explained to me that that did not invalidate them. But it would seem that it would, inasmuch as real dreams happen only when the "censor" is not on duty and are the result of actions going on in the unconscious mind, and it would be rather difficult

even for an hysteric to fathom her unconscious mind and make up a proper dream. Not many centuries ago much harm came, even legal killing, from very good and, as they themselves thought, very intelligent people, believing the stories of lying children. Are we to accept the fanciful statements of imaginative hysterics, who by definition are devoid of any conception of truth, to help in building the edifice of a great philosophy?

The frequent statement of the disciples of Freud, that those who oppose their teachings are men of no standing; that they are "back numbers" and unprogressive and ignorant; that they have never attained to the higher intellectual level; that they are mere describers of symptoms and are not intelligent enough to understand such profound matters of philosophy, is not of importance save as indicating a rather egotistic state of mind. It is scarcely an argument, because the question is not what one set of gentlemen think of another set, but whether particular dogmas as to the causation of certain pathologic states are true. If I were to maintain that the moon is made of cheese the correctness of my opinion would not be strengthened by calling gentlemen who doubted it names. It certainly does not require an intellect of a very high order to understand whether hypotheses ought to be accepted as proven facts; whether the Freudian doctrine as to dreams is scientific; whether you can learn much about the contents of a man's unconscious mind by listening to the unbridled babble of his tongue; whether the statements of hysterics are to be accepted as true without question and a system of philosophy be based thereon; whether it is wise to keep an already perturbed mind constantly attentive to sexual matters; whether the test of word association is of much or little value, and whether, when a woman sees a fireplace in a dream, she is really the victim of unconscious "libido" and is symbolizing her own vagina.

I remember an old and distinguished professor of medicine in Germany who, when some years ago I told him I had aspirations to become a neurologist and alienist, looked at me kindly and a little quizzically and then said: "Be careful, my young friend, alienists are all a little queer." The old gentleman had some justification then, but what would he think now could he be told, what we are often told, that psychoanalysis is one of the greatest contributions to therapeutic art?



## DISCUSSION.

DR. F. X. DERCUM.—I need not say that I am heartily in accord with the emphasis which Dr. Burr has placed upon the causes of mental disease. I have only a short time ago in an address at the annual meeting of the Philadelphia Psychiatric Society laid emphasis upon the causes of mental disease inherent in the patient himself. There can be no doubt that these intrinsic causes, causes which are dependent upon arrests, deviations and other abnormalities of structure and function, whose origin is to be sought for not only in the very beginnings of the individual, but in his ancestry, far outweigh all other causes; the latter indeed must and can only with justice be regarded as adventitious and as far secondary in importance. It is a known fact that even such extrinsic causes as the infections, poisons and physical traumata are far more potent to bring about mental disturbance in individuals already inherently neuropathic than in those of a normal makeup.

Psychogenic causes so-called must of course be included among the traumatic and it is a matter of every-day experience in the asylums that psychic factors play but a very limited role in the evolution of mental disease. As I have elsewhere pointed out, among such psychic factors the older writers used to give a prominent place to worry, care, sorrow, remorse, reverses, disappointments, misfortunes, but that as our knowledge of mental disease has increased, we have found that whole groups of affections, such as melancholia and mania, bear as little relation to psychic causes as does epilepsy. Manic-depressive insanity is now known to be a specific neuropathy, one almost exclusively hereditary, that bears no more relation to psychic traumata than it does to infection. The more we learn of the true nature of mental disease, the more have psychic causes retreated into the background and our ever widening knowledge has demonstrated that such factors can merely be incidental and at most would be of value only when there is a pre-existing neuropathy; and, finally, that this value is exceedingly limited. At most psychic factors give to the pre-existing morbid state a special coloring, give a special detail to a delusion or an obsession, act as an incidental support, a framework, a trellis, on which a delusional or obsessional feeling can secure a hold or by means of which it can find expression.

As is well known, the Freudian sect, for the Freudians constitute a sect by themselves and should be treated as such, ascribe every known form of nervous and mental disease, with the sole exception of those affections the actual organic, toxic or infectious nature of which it is impossible to deny, to psychic causes sexual in nature. It is not necessary to review before this society the history of psychanalysis. It is not necessary to speak of Breuer's case of hysteria and of the recovery of the patient after her confession of masturbation, nor to repeat the specious theory of repressed complexes and the doctrine of displacement and conversion to which fears, obsessions, delusions, tics and what-not are claimed to be due. It is not necessary before this society to recall the views of Janet to which the psychanalysts have not deemed it necessary to give attention. Janet,

as is well known, long ago showed that the neurasthenic-neuropathic states which are characterized by fears, obsessions, states of anxiety, indecisions and like phenomena are but a manifestation of one neuropathy to which he applied the term psychasthenia. To this profound discovery of a great underlying scientific truth, to this brilliant generalization, he added the further observation that in this neuropathy, in many of the cases, various acts of the patient in the past, breaches of conduct, of the proprieties, peccadillos of various kinds of which the patient is subsequently ashamed and which he tries to forget, play an important role in the detailed evolution of the symptoms. Strange as it may seem, the Freudian sect did not even recognize the value or importance of Janet's observations; indeed they seem to have been strangely ignorant of them. Certain it is that they added nothing to them. Instead, on such material as is furnished by the Breuer case of hysteria, and restricting all causes to sexual transgressions, they proceeded to erect a special and peculiar system of psychology, special first in that it deals exclusively with sexual factors and secondly peculiar in that it constitutes a system of psychology of the unconscious mind. Doubtful inferences, questionable hypotheses are dealt with by this sect as though they were established facts and this too in a field in which from the very nature of the case that which actually occurs is beyond the possibilities of human knowledge. I need not review the phantastic attire in which their ideas have been clothed, the weird verbiage by means of which their theory has been obscured, but simply recall to you that they deal with so-called "repressions, displacements, condensations, transference, introjection, projection, introversion, conversion, sublimation, determinations, exteriorizations" and what-not as though these terms represent actual, observed, concrete facts, instead of being mere metaphysical abstractions.

Dr. Burr has already reviewed the subject of dreams. I need not retail to you again the secret non-communicable nature of the dream, the desire suppressed, veiled or outspoken which constitutes, according to this cult, the important factor of the dream, nor need I dwell upon the critique or censor which Freud has found necessary to call into existence, and to which supersuspended fragment of the ego he ascribes a watchful care over the proprieties so that the ugly facts of sexual transgressions and sexual perversions shall not be presented in the ordinary and vulgar language of the day but shall be modified or, as they express it, "symbolized"; nor will I take your time to discuss further the association test which the Freudian sect has added to its armamentarium save to say that the test by word association yields for the most part results which are essentially trivial and which are open to the same vagaries of interpretation as are the results of dream analysis.

The analysis of the unrestrained recollections of the patient, of dreams, and of the association tests presupposes a repression of thoughts with an unpleasant emotional content. That this view, however, is not in accord with universal experience must, I think, be unhesitatingly admitted, for it is impossible to forget a real worry, such as a crime, the death of a child, a financial disaster or some other great personal misfortune. The greater

the worry, the more insistently is it presented to the mind. Far from being forgotten, it recurs with a frequency in proportion to its seriousness and importance. How strange it is that the Freudian sect insist that all these detachable and movable memories and emotions have to do exclusively with sexual matters! How significant it is that they seek cover under the subterfuge that the repressed ideas coming to the surface in dreams, in psychanalysis, in the association test, do not signify what they appear to signify, but are masked, disguised, are as they claim symbolized! Truly the art of the psychanalyst lies in the interpretation of these symbols. It is not necessary to point out that with such hypotheses as these the psychanalyst can find in a given patient anything that he is looking for. The interpretation of the amnesias, of the dreams, of the association test, depends upon the imagination, the auto-suggestion of the analyst, upon the figments and fancies of his own brain. As I have elsewhere expressed it, as in hypnosis, the believing physician and the believing patient react upon each other; both are under the influence of the same suggestion. The patient knows just what is expected of her and the physician finds just what he is expecting to find. In other words psychanalysis, in spite of the special technic which is claimed for it, is nothing more than suggestion in a new guise. The psychanalyst puts into the case exactly that which he takes out. The conclusion to be formed from an investigation of a case exists preformed in the psychanalyst's mind, namely, that there are present in the patient repressed sexual memories. This preformed conclusion the analyst regards as an axiomatic truth. All else naturally follows. It is not necessary to detail here some of the lengths to which the psychanalysts have gone. They deal not only with the sexual traumata of childhood but actually invade the period of intra-uterine life to find support for their doctrines. I need not recall to your minds the theory of Freud's Hungarian disciple Ferenczi of the unconditioned omnipotence of the foetus in utero; I need not call to your minds the theory of Ferenczi of the fright from which the babe suffers in the act of being born, that is the fear which it experiences in passing through the pelvis of its mother, and that this fear is the prototype of the attacks of fear from which patients suffer later in life, such attacks being only reproductions of this birth-fear. I need not call to your minds the theory of the eroticism of the child, nor Stekel's definition of the child as a polymorphic pervert and universal criminal whose first sexual tidal wave is reached at three or four years of age and whose determining factor is incestuous love. I need not remind you of other and equally weird assertions, *e. g.*, that the sublimation of erotic and criminal tendencies gives rise to the surgeon; that economy and love of order and obstinacy indicate anal eroticism; that luxurious water closets indicate homosexuality; and again, that the love for domesticated animals and the liking for sport are to be regarded as the outcome of the libido; that the dream embraces not only the life of the child but also that of the savage and primitive man; that the epileptic attack is a retrogression into the infantile period of wish fulfilment by means of incoördinate move-

ments; that the epileptic attack is the overpowering of the moral consciousness by the criminal unconsciousness and that it replaces the sinful sexual act. We are told that melancholia and mania are the products of the repressions and displacements of the converted sexual desire, the transformed libido. We are told that paranoia has its origin in homosexual love, that it is due to an irritation of the anal erogenous zone. The symptoms of dementia præcox are conditioned by thoughts which because of their unpleasant character are repressed; the lucid ideas of the patient in this affection are merely "symbols of thought," the patient suffers from reminiscences of humanity, while his history embraces all mythology. The real underlying, the fundamental, the central phantasy of dementia præcox is of course the incest, the Oedipus complex. Finally, the psychanalyst has not hesitated to invade other fields; he explains migraine and every form of headache that is not organic, asthma, angioneurotic oedema, hysterical sneezing, mucous colitis and other affections, as having a sexual origin. It is difficult to find words to characterize adequately such a system of psychology or of psychiatry. The views expressed savor themselves strongly of mental disease and yet they are dealt with by the psychoanalytic sect as though they were profound discoveries, sublime revelations, self-evident facts, axiomatic truths.

I have elsewhere pointed out that as a matter of asylum experience, sexual psychogenic factors are exceedingly infrequent. The relations of the individual to the other members of the community are exceedingly close and the interchange of function unceasing. As a matter of fact disturbances of the complexes dealing with these relations are far more numerous than those dealing with self-preservation, or with sex; they are typified in the paranoid states. Similarly disturbances of the complexes dealing with self-preservation, namely, delusions dealing with food, digestion, the viscera, etc., are also found in great number in the asylums. The complexes dealing with sex are on the other hand very infrequent; indeed they usually require to be unearthed. As a matter of fact they are found not so much in the asylum as in that great mass of cases met with outside of the asylums and which fall under the general caption of hysteria. That in hysteria everything can be found which is sought for is a truth which need hardly be called to your attention.

In closing let me say that it should be a matter of keen humiliation and chagrin that at an epoch when psychiatry is beginning to unfold a practically limitless field for actual scientific research, men should be found willing to devote themselves to a cult, to an ism, which like a salted mine returns to the investigator only that which he himself puts into it. Blind pockets from which even the semblance of light is excluded, are his portion, nothing more. How much more inspiring it would be to know that he were at work upon the biochemical problems confronting him to-day at every step. I need not recall to your minds the modern problems of auto-intoxication, of the toxicity of the sera and secretions, the doctrine of the leucomaines, the problems of metabolism in the heboid-paranoid group and in manic-depressive insanity and in epilepsy, the problems pre-

sented by the biochemistry of the blood, of the cerebro-spinal fluid, the suggestive parallelism between auto-intoxication and recovery in the insane on the one hand and Ehrlich's theory of infection and immunity on the other, and further the whole world of serological problems now opening up, not to mention the ever-widening role of the internal secretions. Surely this is the direction of psychiatric progress. In actual material solution of the great biochemical problems of the day lies the hope of a real advance in psychiatry, not in closet-born theories and sterile speculations.

DR. WM. A. WHITE.—Of course it is entirely impossible to deal with these two papers in the few minutes at my disposal, but I think something should be said, even though I feel that I have been pretty well raked over the coals by the speakers, because I am in sympathy with psychoanalysis. Psychoanalysis, speaking very simply, pretends to do with the human mind what we learned to do with the human body hundreds of years ago; we had to learn to dissect the human body to find out what it was made of, just in the same way they have got to learn to dissect the human mind to find out what it is made of, and our efforts to do that dissection of the human mind must be made in the face of just about the same kind of arguments, the same kind of prejudices that hampered the efforts to dissect the human body years and years ago; every scientific advance, every step forward, every opening of a new door is made the same source of the same kind of resistances. I am entirely in harmony with Dr. Burr when he says that it does not make any difference about the type of the individual who stands for a certain doctrine; I have no feeling against the people who make this resistance; I consider them of value in the community. Galileo said he saw satellites about Jupiter and people said there was no such thing; there was nothing like that in the Bible. He said he had a telescope through which you could look and see these satellites; they said it was a sin to look through a telescope, and even if you did look through it the telescope was made with the satellites in it.

Dr. Burr has presented certain cases, certain clinical records and dismissed the subject by saying the whole thing was absurd; he did not bring forth any specific argument. A society of this sort should be the proper arena where such things should be threshed out on scientific merits; prejudices should not enter into the question at all. I am a psychoanalyst; I want the truth and I am willing to welcome any light that may be thrown upon the situation. I appreciate psychoanalysis for I have been confused by actual clinical contact with patients in regard to the underlying principles and meanings involved and so I know there is an element of truth in the whole movement, which would be extremely unfortunate for us to discard at this point. It is not the criticism of psychoanalysis that has been presented; I have no doubt that many hypotheses will be laughed at in years to come as being in fault, perhaps some of them ridiculous, but what we want is their correction at this point; we want more light; we want more truth; it does not do any good to call them absurd and let the matter go at that. Why not when dealing with psychological things stick to them; why must people go back of them to physical things.

until we are ready; while we are on the road let us deal frankly with the psychological subjects and not presume anything we do not know. Now, I anticipate for psychoanalysis an attitude of open-mindedness toward a movement which is endeavoring to help a certain type of sick individuals. It is not true that the psychoanalyst always seeks for certain repressed sexual features. The psychoanalyst deals with the patient in a difficulty; he tries to find out what the difficulty is and how to help the patient out of the difficulty, just as every other physician does, and he does not jump at a whole lot of make-believe things. It may be true of certain beginners who do not understand it. We have to follow the patient and never lead him. We do not know when a dream is told to us what the translation means; we have no possible way of knowing. When the psychoanalyst speaks himself of being cock sure, when he speaks with certain assurance before the other physician who does not understand such things, he is suffering from something which cannot be laid at the door of psychoanalysis. Psychoanalysis is a method and as a result of the method certain things have been uncovered, which are facts, whether they exist in the mind of the patient, the psychoanalyst, or anywhere else, and those facts must receive some interpretation; if our interpretation is wrong, there is a right interpretation, and I ask the people who criticise the movement to come forward and tell us what all these things mean. We offer our explanation; we are willing to withdraw if we are wrong.

I trust this society will maintain an open attitude toward this subject. I will only say one word more: I think very largely the difficulty of understanding the whole psychoanalytical movement is a lack of understanding of what is meant by the unconscious; that is an extremely difficult concept to get. I have spent many months in getting a clear idea about it, and I would invite your attention especially to that feature. It is not strange that the psychoanalyst should say that he has thrown a certain light on these things. We have, many years, been studying the human mind; we have gone deeper and deeper into the explanation of mental actions, and welcome any light that can be thrown on the human mind.

What I have said is a simple statement of fact. Now I believe there are others who also want to speak a few moments and so I will stop.

DR. HOCH.—In addition to what Dr. White has said so well, I should like to bring out only a point or two in regard to our experience with Freudian psychology in psychiatry. I think it must be admitted that the interpretation of dreams and of the material contained in the neuroses is difficult, and that every conscientious observer is bound to have a period of uncertainty which can be overcome only by painstaking work and the collection of a large amount of evidence. It is therefore fortunate that a careful study of the psychoses, more especially of the delusions and hallucinations in the constitutional disorders, gives any one who really desires to get at the facts, an easier and quicker way to obtain this knowledge. Whereas in the neuroses much is left to the difficult method of interpretation, very little interpretation is often needed in the psychoses, because here the unconscious tendencies may be directly expressed in the delusions

of the patient. Now as a matter of fact, we find a good deal of what Freud has claimed directly corroborated by the study of psychoses; more especially do we find the most fundamental facts of Freudian psychology confirmed, namely, the existence of unconscious infantile motives, and it is certainly not accidental that these motives are identical with those which Freud inferred from his psychoanalytic studies of the neuroses.

It always strikes me as a very unfortunate fact that discussions like this deal chiefly with denials of certain interpretations and not at all, in a constructive way, with fundamental principles. Dr. White has very correctly said that we see certain facts which require interpretation. If there are better interpretations available than those which we offer, we should certainly gladly accept them.

Then another word in regard to the study of psychoses. The current theories of auto-intoxication, etc., although they are in harmony with the general tendency of medical thought, are, after all, often on a very flimsy basis. Therefore we feel that in our attempts at studying the development of psychoses from a dynamic psychological point of view (without denying that there is another side to the problem), we are more conservative because we are willing to stick to the facts which we see, and to study the relationship of these facts among each other, rather than to make final premature theories which include the physical side at a time when there are not enough facts to warrant this.

DR. C. W. BURR.—Mr. President, it is rather late; we are very hungry. I have said all that I have to say; nothing that I have heard has given me the slightest reason to change or alter my view-point.

# THE MEDICAL EXAMINATION OF MENTALLY DEFECTIVE ALIENS: ITS SCOPE AND LIMITATIONS.

By L. L. WILLIAMS, M. D.,

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In the paper which I am presenting through your courteous invitation, I shall not attempt to describe the diagnostic methods employed in determining the existence of mental defect among alien immigrants, but shall endeavor to present briefly the problem as viewed from the administrative standpoint, with some statement of what can be done and what cannot be done under present conditions, as well as an account of the progress which has been made and the results which have been accomplished.

The intensive study of the feeble-minded during recent years, the propaganda for the early detection and proper care of defectives and the warning given the public as to the consequences to the state of the multiplication of persons of this type, have had, among other good results, a marked and beneficial effect upon the medical inspection of mentally defective aliens. To make my meaning plain, it will be necessary to explain briefly what the medical inspection of aliens consists of, and to contrast former conditions with those which obtain at the present time.

Medical officers of the United States Public Health Service are required by law to certify, for the information of the immigration officials, all physical or mental defects or diseases observed among aliens presented to them for examination. The law divides the persons who are subjects of medical certificate into three great classes: First, those who suffer from physical diseases and defects. The deportation of persons of this class is not mandatory, but they may be landed or deported in the discretion of the immigration authorities. The medical certificate operates merely as a handicap in these cases and is considered by the immigration officials along with the rest of the evidence affecting the indi-



vidual's right to be landed. As a matter of fact most of the aliens in this category are landed. Aliens of this class who may be landed are of course liable to become a charge upon the public, but pecuniary loss is the worst that can happen.

The second class comprises persons suffering from loathsome or dangerous contagious diseases, including such ailments as favus, trachoma and other chronic infectious diseases. In addition to the economic burden, these persons are likely to spread the diseases from which they suffer; their exclusion is therefore mandatory under the law.

The third class includes the insane, epileptics, idiots, imbeciles and feeble-minded persons. The insane and the low-grade idiot are of importance mainly on account of the financial burden involved. As the high-grade imbecile and feeble-minded, on the other hand, in addition to the financial loss they may occasion, are more disposed to delinquency and are especially likely to become the progenitors of an ever-increasing line of defective dependents and delinquents, they form the most dangerous class of immigrants seeking admission into the country. The exclusion of all these defectives is now mandatory under the law; but this has not always been so. The law of 1891 required that idiots and insane persons be debarred. The act of 1903 included idiots, insane persons and epileptics. The immigration law of 1907 for the first time added imbeciles and the feeble-minded to the list of persons to be absolutely excluded. Prior to this date the feeble-minded, if made the subject of a medical certificate, were landed or deported at the discretion of the immigration officials. Moreover, as most of the discretionary cases were landed, there was not much incentive to engage in the very laborious task of sifting out the feeble-minded. The addition to the law of the words "feeble-minded persons" and the placing of these persons in the category of those whose deportation is mandatory has been far-reaching in importance and has been the cause of a most radical change in the character of the medical inspection of immigrants at Ellis Island. This change in the law and the consequences that have followed it are directly due to the awakening of public interest in this question, and the education of public sentiment by the splendid work done in this department of medicine during recent years. Earnest work, whether done in the laboratory or in the

field, eventually comes into its own, and this is only another conspicuous example of the practical fruits which the public eventually reaps from scientific work which, at first sight, may appear to be only of academic interest. In this particular instance an awakened public sentiment became crystallized into law and as the medical examination of aliens is conditioned by law and must, of necessity, proceed along channels which the law indicates, the beneficial results have become apparent.

The problem presented to the medical staff is the necessity for examining daily, between the hours of 9.30 a. m. and 4.30 p. m., from 2000 to 5000 immigrants, without such undue detention as would result in blocking the work of the immigration officers and causing an indefensible congestion in the quarters for immigrants detained over night. This examination is expected to weed out from a polyglot multitude all individuals suffering from physical and mental disabilities and to do this without the aids available to the physician under ordinary circumstances. No help is given by the alien and no previous history worthy the name is available. There is no indication upon which to base inquiry save the appearance, behavior and psychical reaction of the subject; speed is absolutely necessary; much of the work must be done through the medium of interpreters; and the varying characteristics and normal mental reaction of different races must be constantly borne in mind.

In ordinary practice the suspected defective comes to the observer with a presumption against him; something in his past history has invited attention to him as a possible mental derelict, and he is brought to the physician by those responsible for him and who are usually actuated by a desire to learn the truth with a view to placing him in the best possible environment. The alien on the other hand appears before the medical examiner merely as a possible candidate for deportation. A positive diagnosis will not result in placing him in a favorable environment, but will be merely the signal for his exclusion. The medical examiner, therefore, in any attempt to secure his previous history, will, as a rule, get none or else a false one.

In dealing with mental defectives the law confers broad powers upon the medical officers of the Public Health Service and in effect requires deportation upon a medical certificate. While

it would be a technical compliance with the law to cause a certificate to be issued by a single medical examiner, it is regarded as unwise to place so heavy a responsibility upon a single man. To safeguard the alien's interests, as well as those of the country, and to avoid as much as possible errors due to the personal equation, the procedure to be described has been adopted.

As the immigrants pass through the primary inspection line each is inspected by two physicians, one of whom takes special note of any indication of mental defect or disorder and addresses to each alien a few questions in his own language. All who in appearance or behavior excite suspicion, or who give irrelevant or stupid replies, are set aside for further inquiry. The suspects thus turned aside are at once given a brief preliminary examination for the purpose of sifting out and discharging those among them who are obviously of sound mind. Of those who remain each one appears before a board of at least two medical officers, who examine him by every available test which experience has proved to be useful and prepare a record of their findings. The record is carefully examined by a third officer, and should anyone of them disagree as to the diagnosis, further consultation is had and another examination given at a later date. In case of doubt or when the alien is emotionally disturbed he is sent to the hospital for observation. To still further guarantee him against unjust exclusion, moreover, he may be re-examined upon the request of the Commissioner of Immigration, of any medical officer, of his relatives or his attorney; in brief, upon the request of anyone having any legitimate connection with the case. In addition, his relatives or his attorney may have the privilege of causing him to be separately examined by a private physician of their own selection, and the report of such physician is given careful consideration. No such private physician, however, is permitted to participate in the official examination or to take part in the deliberations of a medical board. Much pressure has been brought to bear from various sources, including a federal court in at least one instance, to have the alien's physician participate in the official examination, but such pressure has been consistently resisted. What the law requires us to do we can neither shirk nor delegate to another. It will thus be seen that every reasonable precaution is taken to provide against an error which would be

detrimental to the immigrant. Such precautions are just, because the execution of the law involves much personal hardship and this should not be increased through hasty action. These safeguards thrown around the alien are often abused, however, and the demands for re-examination of cases which have already been exhaustively considered have at times been sufficiently numerous to seriously impede the day's work.

Many efforts are made to invalidate the medical certificates in these cases. One of the principal methods adopted by the attorneys of aliens certified as feeble-minded is an appeal to the Department, the appeal being accompanied usually by a contradictory opinion from a private physician who has been permitted to examine the case; and it may be stated here that, although some of these opinions are undoubtedly honest, unfortunately there are a few physicians who, while declaiming against the admission of defective aliens in the abstract, will in individual cases attempt to obstruct the operation of the law by opinions which are plainly disingenuous. The authority of the medical examiners, however, is so well guarded by the present statute that no serious danger is to be apprehended from this source, provided that the law is firmly and impartially administered.

Another favorite method is by appeal to the federal courts. Heretofore it has been the practice of the courts to ascertain whether the alien has been accorded all the rights and privileges to which he is entitled under the Immigration Act and, if this is affirmatively proved, to dismiss the proceedings and return the alien to the custody of the immigration authorities for deportation. Of late there has been a tendency on the part of some members of the bench to reverse this practice and to bring into court and to question the validity of the technical procedures which are undertaken under the Immigration Act, and to order the landing of persons who have been excluded. I am not qualified to discuss points of law, but the fact remains that if this tendency becomes a settled practice it will constitute the most serious menace to the elimination of unfit aliens through medical inspection. It may thus easily be seen that the pathway of the examining physician is beset by pitfalls and that he cannot proceed too cautiously in the performance of his duties. Keen attorneys, ever wakeful to find cause for appeal, scan his every act and are prompt to take

advantage of any technical irregularity of procedure or unwary statement as a pretext for attacking his conclusions and attempting to destroy the value of his work.

Under the law the medical inspection is an independent function, necessarily so, inasmuch as it deals only with questions of scientific fact. Herein lies its efficiency, and should it at any time become subordinated to considerations of expediency it will without doubt undergo deterioration.

The progress which has been made in sifting out mentally defective persons from the mass of incoming immigrants is well shown in the official statistics for the past 22 years, covering the period during which the general government has exercised full control of immigration. During the 12 years from 1892 to 1903 inclusive, from one to seven idiots were excluded annually from the United States, a negligible number; from 1904 to 1907 the number deported varied from 16 to 92 annually. After the passage of the act of 1907 the number perceptibly increased, as shown in the following table, taken from the published reports of the Bureau of Immigration:

#### DEPORTED FROM THE UNITED STATES.

Fiscal Year.	Idiots.	Imbeciles.	Feeble-minded.	Total.
1908	20	45	121	186
1909	18	42	121	181
1910	16	40	125	181
1911	12	26	126	164
1912	10	44	110	164
1913	18	54	483	555

For the first ten months of the current fiscal year, 776 mentally defective persons have been detected at the Ellis Island Station, indicating a probable total for the year of 930 at the port of New York. It will be seen therefore that the past two years have been especially productive of results. These figures do not include the insane and the epileptic. In 1912 18 defectives in 100,000 were certified at Ellis Island. In 1913 the number increased to 50 per 100,000. For the first ten months of the current year 91 per 100,000 have been detected. In March, 1914, the rate rose to 148 per 100,000, and in April to 157 per 100,000.

An examination of a large number of records shows that 90 per cent of these persons were illiterate.

While these numbers are not large in comparison with the mass of population, they indicate that there have been stopped at one of the sources of supply a considerable number of individuals, many of whom would not only have themselves become dependents, or worse, but who would have become in time the parents of an ever-increasing progeny of defectives to fill our almshouses, reformatories and jails. The increasing efficiency of this work, as indicated by the record, is most encouraging. The medical staff engaged in this laborious task includes a number of men of large experience and long training, and a spirit of team work has been developed which has made these results possible and which is an earnest of better things in the future.

The medical inspection of aliens, especially mentally defective aliens, is a highly specialized subdivision of practical medicine and requires of the examiner exceptional qualities. In order to succeed he must possess, in addition to a broad professional training, tact, good judgment, firmness, discrimination and the power of close observation; he must be free from prejudice and the partisan spirit; he must not strain after a record or be governed by statistical considerations, but should consider every case that comes before him as though it were the only one upon which he was required to pass judgment. The attitude of the medical examiner toward these suspects must, above all, be a judicial one, for he is, in effect, a member of a jury to decide a grave question of fact, involving the heredity of many future citizens of this country. He should not permit himself to adopt the rôle of prosecuting attorney and must resist the tendency to develop the hunting spirit which would incite him to strain a point for the sake of a record. He represents the country at large and must protect it against invasion by the unfit; but in discharging this duty he must accord to the alien at least that measure of mercy which a court of justice would consider to be his right, and must give him the benefit of every reasonable doubt. To adopt a different attitude and to issue a dictum which is not backed by recorded evidence sufficient to support it beyond question would savor of tyranny, and such a policy in the long run would defeat itself by running counter to the public conscience.

All these considerations, all these difficulties which are bound up with this problem and are an essential part of it, militate against the official certification of the high-grade moron, although it is recognized that he may be a source of greater danger to the community than his more defective fellow. In approaching the problem of the detection of the high-grade defective, we are met at the very beginning of the inquiry by obstacles that are most discouraging. Among these may be mentioned the inability to obtain a history of his past life and activities, of his social and industrial habits, of his emotional stability, of the attitude of his companions toward him and especially of his moral development, or lack of it, as shown by his behavior in his home environment. In an inquiry along these lines the examiner runs against a blank wall. Then we must consider the difficulty in examining such a subject through the medium of an interpreter, and the practical impossibility of holding him for observation long enough to obtain evidence from his behavior. If such observation were possible it would be in an artificial and protected environment in which his habitual reactions would be unlikely to appear. The idiot, the imbecile, and the fairly well-defined grades of the feeble-minded are now the subjects of medical certificates. With increasing experience we may hope to approach the ideal more nearly and may reasonably expect to sift out most of the feeble-minds characterized by intellectual defect. Under existing immigration conditions, and for the reasons given, we cannot hope to detect any large percentage of high-grade feeble-minds whose defect appears mainly in emotional instability or moral obliquity.

The law places a heavy responsibility upon the medical officers who perform this work, a responsibility which should and does make for conservatism. Because of this conservative attitude the medical inspection of mentally defective aliens at Ellis Island has been criticised at times and the claim made that it does not go far enough, and that many persons are passed by our examiners who should be excluded. That the examination is still far from perfect is readily conceded; we hope to make it better. But much of the criticism thus far has been based upon the opinions of observers without medical knowledge; lay workers who have learned the usual tests employed in examining school children, or else upon the dicta of persons who may be otherwise qualified

to express an opinion, but who have not taken into consideration either the practical difficulties which confront the medical examiner, or the gravity of a certificate of feeble-mindedness under the immigration law. We cannot afford to make many mistakes in examining aliens. While failure to recognize a feeble-minded individual results in his admission into the country to the detriment of the state, on the other hand a certificate based on insufficient grounds means unnecessary and painful separation of families and the sending back an alien to the ends of the earth regardless of the hardship involved. An error in the case of a child at school or in an institution merely means that he will be wrongly classified, an error easily corrected. An error which results in unjustly deporting an alien from New York to Eastern Europe is a grievous blunder and is without remedy. A rigid formula which may be very useful in examining school children cannot unreservedly be applied in determining the mental condition of illiterate immigrants, and it becomes necessary to make use of every available means of arriving at a just conclusion. As in all other diagnostic problems, rule-of-thumb methods are misleading and unscientific. In view of the serious consequences, as our findings are frequently combatted at Ellis Island, at Washington and in court, and as all of our work is thus done in an atmosphere of hostility, we cannot afford to depend upon any single test, no matter how valuable, or to adopt a mode of procedure which would result in mechanically grinding out a diagnosis. Nor can we certify as defective a number of individuals concerning whose mental status we may entertain strong doubts. The very word "certify" used in the law lays upon us this limitation. A strong probability will not suffice; we must be certain of our ground. For these reasons it is not surprising that we cannot concede the justice of criticisms based upon work in a widely different field, and which are made without a knowledge of the legal aspects of this work and the discouraging array of practical difficulties which surround it.

"The toad beneath the harrow knows  
Exactly where each tooth-point goes;  
The butterfly upon the road  
Preaches contentment to that toad."



In shaping this work and bringing it to greater perfection the theorist, the faddist, the fanatic and the self-seeker have no proper place. The only rational method of attacking the problem is by close study of the actual conditions, by the application of the experimental method, and by laborious research carried on in connection with the practical work. The criticism of the judicious and the informed, any criticism that is constructive and helpful, will be welcomed. Mere fault-finding is unproductive, and can serve no useful purpose.

Some original investigations are now being conducted at Ellis Island, and are being pushed as rapidly as the routine work will permit. A medical officer assigned to the special duty of examining as large a number as possible of normal individuals belonging to various races and nationalities, has devised a carefully considered scheme of inquiry, and it is believed that much valuable material will be obtained which may aid in standardizing the tests in use, and assist in establishing at least approximately a practical standard upon which certification may be based. The records of cases which have been held for examination and subsequently discharged, including many which may be regarded as borderland cases, are also being searched for data which may prove valuable.

At present the point of maximum error in the examination is the primary inspection. If an alien is passed on this first inspection, there is no further opportunity to examine him, and it is here that most improvement may be had. To obtain such improvement and more closely sift out possible feeble-minds for further inquiry, this initial examination should be slightly prolonged and more time given the examiner to pick out suspects by such interrogations as may throw light on their mental peculiarities. The additional time required in each case would not be great, but it is difficult to secure it without unduly slowing down the entire process. Two thousand immigrants are now handled at this primary inspection in two hours and a half by operating four inspection lines, the maximum number for which space is available. They pass through therefore at the rate of one every  $4\frac{1}{2}$  seconds, but, as there are four lines, each alien is given on an average 18 seconds. This rate will vary according to the class of immigrants brought by particular ships and will also be

affected by fatigue on the part of the medical staff. The most potent factor, however, in fixing the amount of time given each alien is the necessity for passing them fast enough to avoid blocking the work of the immigration officials. When immigrants are coming in at the rate of 4000 to 5000 daily and the detention space is limited, it will readily be seen that this practical factor becomes dominant; otherwise such congestion would speedily result that the entire process would come to a standstill. A few additional seconds devoted to each alien would be of great value, but, for the reasons given, these additional seconds can be secured only by a substantial increase in the medical personnel and a corresponding increase in the working space. The work which has been done by individuals and by scientific bodies, of which this Association is a type, has had its effect in shaping the law. But the spreading of a law upon the statute books is only half the battle; it is equally essential that adequate means be provided for carrying that law into effect. While the work among mental defectives at Ellis Island is becoming more and more efficient, as shown by the record, the possibilities of the present law cannot be fully realized until a sufficient number of medical officers, a sufficient force of competent interpreters and an adequate working space shall have been provided.

The necessity for such additional provision has been brought to the attention of the national legislature and the effort to secure a complete execution of the law in this regard should command the support of the medical profession, and especially of those members of it whose daily work has given them a clearer insight into the danger to the country from the introduction of persons with mental defect or psychopathic taint, and whose special training entitles them to speak with authority.

The elimination of mental defectives is only one of the phases, probably the most important one, of the great problem of the restriction of immigration by excluding the undesirable elements and many legislative schemes have been proposed.

It is likely that there will be much empirical legislation in the future as in the past before this question is finally set at rest, but I believe that in the long run immigration will be restricted by a process of intensive selection based upon scientific grounds and resulting from scientific study of all of the conditions;

and it may not be too much to hope that the day is not far distant when the intending immigrant will be required to present a clean bill of health, physically and mentally, and a clean bill of character as well and, through agencies to be devised by the scientist and the statesman of the future, be compelled to prove his right to enjoy the benefits of American citizenship.

### DISCUSSION.

DR. BANCROFT.—I have been greatly interested in this paper; it is very illuminating and presents problems which are particularly interesting to the cities of our country, and I would like to ask if it would not be possible to submit the immigrant to some preliminary examination before he is allowed to embark? It would seem that it would be impossible for defectives to come into this country if a careful examination were made at the port of embarkation. I presume there may be difficulties, and I rise, therefore, to ask the question whether these difficulties cannot be solved, and whether it is not possible for the incoming immigrant to be submitted to intelligent examination before he leaves the port of embarkation?

DR. BRIGGS.—This question is a very live one in Massachusetts as in New York, and as a member of the Board of Insanity of the State of Massachusetts, I would say that we have 17,000 people in 27 institutions; of those 13,000 are certified as insane, and 40 per cent are aliens. I have been appointed commissioner of the alien insane in Massachusetts, and we are making a special study of that particular subject. What Dr. Williams says regarding the hurried examinations is not quite as bad in Massachusetts, but if those of us who examine defectives in a clinic think we are doing pretty well if we make examinations of 12 to 15 cases in a morning clinic, what would we think of the examinations at the immigration station, which number three or four a minute? It is a wonder we do not get many more in our institutions than we do. The difficulty is after they get into our institutions, to get them back again as the laws are to-day. They come into the institution and the superintendent notifies us that they are deportable; maybe one member or friend of the family will bring all the sympathies of the family to bear, especially if one member of a large family is sent back alone to Europe and the family thus hopelessly separated. If the pressure of sympathy fails the next thing often is that some relative or friend is paid to give a bond for the patient, to relieve the state of the charge, and after a few years that bond disappears, usually after the time limit has gone by for deporting that case. I do not see now, how, in the cursory examination that is made, the examiner can take in the facts of environment and of the life of the immigrant before he came over. It is most difficult in the mental clinic to size up a patient, see what the normal sur-

roundings have been before making the examination, and what advantages the patient has had to enable him to stand up under the many tests now given.

There is another thing which I think we have got to meet and that is whether examinations shall include syphilis and alcoholism; this is such an important factor in the production of insanity. We have a great many such cases among our immigrants and I believe the time is coming when we are bound to demand some sort of certificate or bill of health before we can admit these doubtful cases.

DR. L. L. WILLIAMS.—The question as to making a thorough medical examination before embarkation is one that has frequently come up, and there is no question that it should be done on the other side if practicable. It is possible that in time it may be done; one foreign government at least may not be very much averse to such a procedure—I have in mind my conversation with some of its representatives—but in many other countries it undoubtedly would be opposed. Such a procedure would save the immigrant much hardship and relieve this country of much trouble. Of course a certain kind of examination is now made by the medical officers of the steamship lines; they are required to make a report in regard to all cases of disease found on shipboard and a fine of \$100 can be assessed against the company if it can be shown that certain diseases found on board could have been detected by competent medical examination before embarkation. These fines are not infrequently imposed but in such instances a clear case must be made out against the steamship company.

As far as the question of getting a "clean bill of character," so to speak, is concerned, that of course would be very desirable, and it is something that we would all very much like to see brought about; it has been suggested that it might be done in the way of passports; how much such passports would be worth I am not prepared to say, but in some cases they might not be of much value, human nature being practically the same the world over. In my paper I have felt obliged to content myself by passing this problem on to a future generation.



## SOME NOTES ON EXPERT TESTIMONY BY ALIENISTS AND NEUROLOGISTS.

By DR. C. A. PORTEOUS AND DR. H. V. ROBINSON,  
MONTREAL, CANADA.

I have been prompted to write this paper principally because it concerns a civil case of much prominence recently heard in the Montreal courts. Dr. T. J. W. Burgess and the writer were summoned, both being witnesses as to fact; the plaintiff's father at the time was a patient at Verdun Hospital.

Such a paper, it must be confessed, brought before this Society, smacks strongly of "Carrying coals to Newcastle," when one considers the many excellent monographs on this subject presented to you in the past few years. My apology must be that a dart, though feebly delivered at an evil, may strike its mark. The writer assumes there is no disagreement among the members of the profession with the assertion that there is room for improvement in the methods allowed and practised, on the one hand, regarding the securing and hearing of expert testimony, and the giving of it, on the other, in the courts of the United States and Canada. This applies particularly to civil cases which hinge upon proof or non-proof of insanity, an example of which it is hoped to demonstrate in this paper; certainly, the contradictory character of the evidence submitted by the various experts in the case here dealt with, calls for some remedy.

Thirteen physicians gave evidence in the case herewith sketched, eleven of whom have made a special study of psychiatry or neurology. The review of their statements, under oath, which forms the major part of this paper, furnishes one of the most instructive examples as to why expert testimony, by alienists especially, in Canada and the United States is to-day liable to be received with a damning smile of tolerance that can well be imagined. The spectacle of reputable medical men (for be it understood that all concerned were, and are highly so) making depositions so bluntly opposed to each other, can but cast a shadow on the physician's

reliability or knowledge, or both, when he is in the witness box—whatever he may be when outside of it.

The fact might as well be squarely faced that a physician is but human, and notwithstanding the high ethical and professional standards to which he is bound, and in justice be it said, to which he faithfully adheres, the influences of partizanship, personal feelings, and the desire that his side shall win in the courtroom, have, in degree, an effect upon his testimony, as upon that of the non-professional and inexperienced witness. A prominent and most able judge of Toronto, Can., not so long ago remarked to the writer that even in his official capacity, when hearing evidence, he felt that subconsciously he gave heed to the very expression of a witness, his manner and his method of answering questions under cross-examination, and that while all these points were distinctly not pertinent to the evidence, they, to a limited extent, tended to bias his belief as to the value of the testimony adduced, either favorably or unfavorably. If a man, with a wealth of experience on the bench, will honestly make such a statement, it would be surprising indeed if the quasi-expert testator could prevent himself from showing some trace of partiality, although he might intend and desire to preserve the aloofness and detachment that one totally disinterested as to the issue in a given case should manifest.

The spirit in which this paper is written is not one of arraignment; it is intended to point out, by a practical example, that the matter of experts and their selection, etc., deserves the most serious deliberation by legislator and physician alike. It is hardly possible in a paper of this scope to attempt suggestions as to how this may be best done. Some practical ideas by an eminent English judge, which bear upon the point of how more unanimity of opinion may be arrived at among medical witnesses, is worth reading, and I quote it with pleasure. In "A History of the Criminal Law of England," by Sir James Fitzjames Stephen, K. C. (Edition 1883, page 575), he says:

It is impossible to say what an expert is to be, if he is not to be a witness like other witnesses. If he is to decide upon medical or other scientific questions connected with the case so as to bind either the judge or the jury, the inevitable result is a divided responsibility which would destroy the whole value of the trial. If the expert is to tell the jury what is the law—say, about madness—he supersedes the judge. If he is to decide whether, in fact, the prisoner is mad, he supersedes the jury. If

he is only to advise the court, is he or is he not to do so publicly, and to be liable to cross-examination? If yes, he is a witness like any other; if no, he will be placed in a position opposed to all principle. The judge and the jury alike are, and ought to be, instructed only by witnesses publicly testifying in open court on oath.

It never would be, and never ought to be, endured for a moment that a judge should have irresponsible advisers protected against cross-examination.

And proceeding, he says:

The truth is, that the demand for experts is simply a protest made by medical men against cross-examination. They are not accustomed to it and they do not like it, but I should say that no class of witnesses ought to be so carefully watched and so strictly cross-examined.

There is one way in which medical men may altogether avoid the inconveniences of which they complain, and that is by knowing their business and giving their testimony with absolute candor and frankness. There have been, no doubt, and there still occasionally are, scenes between medical witnesses and the counsel who cross-examine them which are not creditable, but the reason is that medical witnesses in such cases are not really witnesses, but counsel in disguise, who have come to support the side by which they are called. The practice is, happily, rarer than it used to be, but when it occurs it can be met and exposed only by the most searching, and no doubt unpleasant, questioning. By proper means it may be wholly avoided. If medical men laid down for themselves a positive rule that they would not give evidence, unless before doing so they met in consultation the medical men to be called on the other side and exchanged their views fully, so that the medical witnesses on the one side might know what was to be said by the medical witnesses on the other, they would be able to give a full and impartial account of the case, which would not provoke cross-examination. For many years this course has been invariably pursued by all the most eminent physicians and surgeons in Leeds, and the result is that, in trials at Leeds (where actions for injuries in railway accidents and the like are very common), the medical witnesses are hardly ever cross-examined at all, and it is by no means uncommon for them to be called on one side only. Such a practice, of course, implies a high standard of honor and professional knowledge on the part of the witnesses employed to give evidence; but this is a matter for medical men. If they steadily refuse to act as counsel, and insist on knowing what is to be said on both sides before they testify, they need not fear cross-examination.

I would also refer to the law in France regarding expert witnesses, from which we in Canada, as well as the United States, might glean much of profit to improve faults common to both countries.



In "*Précis de Medecine Legale*," by L. Thoinot, professor of legal medicine of the Faculty of Medicine of Paris (Edition 1913, Vol. 1, pages 36-37), we learn that the nomination of medical experts in France is governed by a decree of November, 1892, Art. XIV, which states that "The duties of medical experts can only be filled by medical men holding French degrees." As to the appointment of medical experts by a decree of November, 1893, Art. I, we find the following: "At the commencement of each judicial year and in the month which follows its opening, the Courts of Appeal in Chambers, the Attorney-General being present, will designate upon their lists the doctors in medicine on whom they will confer the title of expert before the courts." Article II, amended by the decree of April, 1906, states: "The nominees of the court must be graduates of a French medical school residing within the jurisdiction of the court. They must have five years practice in their profession or have a diploma from the University of Paris bearing the special qualification of *Médecine légale et Psychiatrie*, or a similar diploma created by the other French universities."

The French Republic, certainly not a backward nation in legal matters, deems medico-legal experts—and it follows their testimony—of sufficiently grave importance to officially designate who shall be deemed worthy of this title. These experts are appointed yearly, by one of the most powerful judicial bodies of France, and are invariably men fully qualified; they must reside in the judicial district in which the trial takes place, none being called from outside the "*arrondissement*" of the tribunal, *i. e.*, the district over which a particular court presides, and a special diploma is exacted in lieu of five years' practice. Such a system unquestionably makes for a high standard in the personnel of the medical expert, and surely it cannot but place his testimony on a plane not easily assailed by even the most astute attorney, as well as armor it against cavil by the laity.

Now as to the case at issue: First, the salient points regarding certain physical features and the character of the psychosis from which the patient suffered may well be presented.

G. M., Montreal. Previous History: Admitted July 15, 1912, to Verdun Hospital, aet. 66; first attack manifested itself November, 1911, in insomnia, irregularities in finance; at present shows visual hallucinations;

suicidal propensities; capricious appetite; insomnia; heavy drinker for thirty years; progressive muscular atrophy evident in wasting muscles of right thenar eminence; has lost weight; has arteriosclerosis; emotionally depressed and states he contemplated suicide.

On Admission: Depressed; speaks of suicide and claims to have attempted it; delusion that detectives are continually on his track; says he lost several hundred thousand dollars in poor business deals and that he is financially ruined; worrying greatly over his son, who is now seriously ill with typhoid; sleepless.

*Abstract of Physical Examination.*—Pulse 68. Circulatory System: Arteriosclerosis of radial and temporal arteries evident; blood pressure 168, pulse pressure 65. Kidneys: Examination of urine; nothing abnormal. Syncopal attacks several (five or six).

*Diagnosis.*—Melancholia of involution type.

The litigation in the case centers about these facts. The patient, G. M., was certified as insane in July, 1912, and committed to Verdun Hospital in that month. In the months of February and March, 1912, he had made over certain bonds and securities, worth some \$70,000, to his nephew, W. M. The patient's son, R. M., claimed that this collateral was given to the nephew without adequate consideration of any kind and that his father's mind was affected when he made the transaction. He, R. M., therefore brought suit against W. M. to recover the said securities, etc. The question to be decided resolved itself into, whether when G. M. transferred this valuable collateral to his nephew he was in a fit mental state to do so or not. Both sides called a number of expert witnesses, and the vital portion of their testimony is appended in juxtaposition. Were any one of you who read this article called upon to be the judge, from the learned expert testimony presented, what would your decision be? You are not required to give your opinion on the value of expert evidence in the connection; it were better left to the imagination. I have totally disregarded in this paper what has been said by the lay witnesses. It has no particular place, as it is quite non-technical. Suffice it to say that it brings much to prove the man was absolutely insane and perfectly sane when he consummated the business deal out of which the suit arose.

A brief hearing of the depositions of Dr. S. and Dr. T., the physicians who saw the patient in January and March, 1912, should first be considered. Neither affected alienism or neurology, both being general practitioners. Their declarations seem of especial

value, owing to the symptoms which both observed, and the early dates, viz., January and March, 1912, on which they saw the patient.

Deposition of Dr. S., a witness produced and examined on behalf of the plaintiff in this matter.

Examined by H. J. E., counsel for plaintiff.

Q. Will you describe to us the condition in which you found the interdict, G. M., when you made your first examination in January, 1912?

A. A physical examination developed a condition of marked arteriosclerosis, or hardening of the arteries, enlargement of the heart, and wasting of the muscles of the hand. The nervous symptoms at the time were insomnia, great agitation and inability to fix his mind on what I talked to him about.

By the Court:

Q. Inability of concentration?

A. Yes. A "stary" look when you talked to him for a while, and you had to recall him to himself in order to get him to answer questions correctly. He also had an idea that he had ruined his boy.

Mr. E., continuing:

Q. When was this?

A. Early in January. I prescribed for him and the case went along. At times I heard from Mrs. M. that he was still walking the floor at night, and unable to sleep; that he was taciturn and would not talk. The next act of importance in his case was toward the end of February, when he had a revolver and thought he would do away with himself. Mrs. M. took the revolver from him.

Q. From your examination of the patient up till that time, and from your practically constant observation of the man, what is your opinion, as a medical man, as to his mental condition at that time?

A. I think he was mentally unfit at that time, and he was gradually getting worse.

Q. What condition did you find him in prior to the 5th of March, when you advised his incarceration in a sanitarium? Was he sane or insane?

A. Insane.

By the Court:

Q. And it goes without saying that he was insane in June when you came back?

A. Yes.

By Mr. E., continuing:

Q. In your opinion, what would be the effect of such a condition on his capability to conduct business?

A. I don't think he was fit, for the simple reason that he could not concentrate his mind on the business he had to perform.

Deposition of Dr. T., a witness produced and examined on behalf of the plaintiff in this matter.

Examined by Mr. S., counsel for plaintiff.

Q. Do you know G. M., now a patient in the Verdun Asylum?

A. Yes, I do.

Q. How long have you known him?

A. I have known him since the beginning of his son's illness. As far as I can remember, it may have been September or October, 1911. It was the beginning of the autumn of the year he was taken ill. As far as I can remember the first time I saw Mr. G. M. professionally was some time in the first two weeks in March. I could not be quite precise about the date.

Q. March, 1912?

A. Yes.

Q. Some time in the first two weeks of March?

A. Yes, as near as I can remember.

Q. What was his condition at that time?

A. When I saw him I remember it was in the late afternoon. It was pretty dark in the room where he was. I saw him sitting in a chair looking very downcast. I sat down and began to question him. I asked him what the matter was, and I told him that Mrs. M. was worried about him and had asked me to see him. At first I could not get any answers at all. He simply sat there in a gloomy condition, and I had the greatest difficulty in getting any information at all from him. I asked him whether he felt ill himself, that is, whether he was physically ill, and he said, "No." I then asked him what was the matter, and he said, I cannot give you his exact words, because I cannot pretend to do so at this distance, but he said, "It is terrible. I have ruined my family." That was really the first intimation I had that there was anything wrong with him.

Q. What idea did you form, if any, as to the character of the mental trouble from which he was suffering?

A. Well, I came, first of all, to the immediate conclusion that he was profoundly melancholic. Nobody could have seen that man in the attitude in which he was, and the way he answered questions, without coming to the conclusion that he was in the larger sense melancholic.

Q. Will you tell the court the opinion you formed as to whether he was rational or irrational?

A. I may say, whenever I spoke to him, asking him what he felt like, or how he was, he would always come back upon this same idea that he had ruined his family. That was the invariable topic which he drifted back to, and that without my suggestion. If you asked him what was the matter with him he would answer, "Oh, I have ruined my family. It is terrible." That was the usual way he spoke.

Q. Did you tender any advice to the family concerning him during that period?

A. I did, yes. The advice was that, in the first place, I considered Mr. G. M. was not in his right mind, and that it was a question as to what should be done with him.

None of the alienists or neurologists whose evidence is subsequently submitted examined the patient until after he had been committed to Verdun Hospital in July, 1912; they were unanimous in their opinion as to his condition when seen by them; they all state that the man was a case of involution melancholia beyond doubt. It is in their deductions as to how long the disease had existed *before* they saw the patient, that their amazing differences of interpretation are manifested.

EXTRACTS FROM EXPERT  
TESTIMONY, AND CROSS-  
EXAMINATION THEREON,  
AS GIVEN FOR PLAINTIFF.

DEPOSITION OF DR. U.

Examined by Mr. C. H. S., of  
counsel for plaintiff.

Q. Dr. U., you are Superintendent  
of the ——— Hospital for the  
Insane?

A. Yes.

Q. It is recognized by the Govern-  
ment of the Province of Quebec?

A. Oh, yes. As a matter of fact,  
I am appointed as superintendent by  
the government.

Q. How long have you occupied  
the position of superintendent of  
this institution?

A. Twenty-three years.

Q. Before that, were you in the  
same profession?

A. I have been forty years in the  
same profession.

Q. As a specialist in mental dis-  
eases?

A. Yes. Very nearly forty years.  
Practically forty years.

Q. Have you among the patients  
at the ——— Hospital for the In-  
sane a person named G. M.?

A. Yes.

EXTRACTS FROM EXPERT  
TESTIMONY, AND CROSS-  
EXAMINATION THEREON,  
AS GIVEN FOR DEFENDANT.

DEPOSITION OF DR. E.

Examined by Mr. S. L. D. H., of  
counsel for defendant.

Q. Are you a practising physi-  
cian and surgeon?

A. Yes.

Q. What is your position?

A. I am superintendent of the  
——— Hospital for the Insane at  
———.

Q. That is the public hospital for  
the insane?

A. Yes.

Q. Did you examine G. M., who  
has been referred to in this case?

A. Yes.

Q. What was the date of your  
examination?

A. December 17.

Q. December 17, 1913?

A. Yes. Together with Dr. B.

Q. In what condition did you find  
him? Was he suffering from any  
trouble?

A. Yes. I found him suffering  
from melancholia.

Q. In view of all the evidence  
which has been given at this trial,

Q. How long has he been incarcerated there?

A. I was absent in Europe at the time he came in, but according to our records he came in on the 15th of July, 1912.

Q. You were absent at the time?

A. Yes. I first saw him, I think, on the 27th of August.

Q. Did you examine him personally on your return?

A. I did. Either the first or second day after my return.

Q. Did you have a report with regard to him when you returned?

A. I had the case book reports.

Q. What was the condition of G. M. when you personally examined him?

A. I found him suffering from melancholia.

Q. Is that a technical expression?

A. It is the ordinary technical phrase for that form of mental disorder. Of course there are any number of subdivisions of that form. If I had to put it down before a lot of medical men, I would say he was suffering from involutional melancholia.

By the Court:

Q. Does that mean melancholy against his will?

A. No, sir. Evolutional is a gradual progress forward. Involutional is a progress backwards.

By Mr. S., continuing:

Q. Is that a form of mental disease?

A. Decidedly.

Q. Would you call it insanity?

A. Certainly.

Q. Will you describe to the court the characteristics and peculiarities of this form of mental disease?

A. Melancholia, especially this form, is a disease of very slow

and the documents which have been filed in this case, what is your conclusion as to the sanity or insanity of G. M. during the months of December, 1911, January, February, March, 1912?

A. In December, 1911, and January, February, March, 1912, I do not consider he was insane at that time.

Q. Do you consider he was sane?

A. Yes.

Q. On this evidence and on the documents filed, what in your opinion was the mental capacity of G. M. to appreciate the nature of the transactions referred to in this case? That is to say, on or about the 5th of March, 1912, and about the 21st of February, 1912?

A. I think he had the mental capacity to fully appreciate the nature and quality of his act at that time.

Q. You say you think—is that your opinion?

A. I give that as my professional opinion.

Q. Would you consider from the evidence made in this case, and from the documents filed, that Mr. G. M. was suffering from confirmed melancholia (which is a continuous and progressive disease) during the months of December, 1911, January, February and March, 1912?

A. No.

Q. With regard to the evidence of Dr. S. and Dr. T., what have you to say?

A. I have gone very carefully over the evidence of Dr. S. and Dr. T. and studied their descriptions as carefully as I possibly could. Dr. S. had first observed Mr. M.'s condition in the beginning of the year. He said he was agitated and that

growth, ordinarily speaking (I am speaking, of course, of cases that come into hospitals). The disease exists for months and months prior to the admission of the patient. The beginning of the disease is so insidious that very often the friends do not notice it in the early stages at all. After that it is gradually progressive. The disease in many cases (especially in involuntal melancholia) is dependent upon a condition that we call arteriosclerosis—that is, hardening of the arteries—and that disease is progressive beyond a doubt. At the beginning the symptoms are very insidious, and perhaps the friends do not notice it at all. They gradually become worse and worse, and finally the man has to be taken in charge. After he is taken in charge he still continues to grow worse. Finally he winds up in a condition of what we would call dementia, which is followed by death.

Q. Is there any going back, or recovery?

A. I think not. Not in a case of arteriosclerosis. You cannot soften the arteries when they are once hardened up.

By the Court:

Q. Then, it is a result of a physical condition?

A. A physical condition, probably plus some worry as an exciting cause. The thing depends in the start upon a physical condition—a condition of the arteries.

By Mr. S., continuing:

Q. And that is what G. M. had and has?

A. Yes; he had and has.

Q. Would you say that was the cause of his mental condition?

he had insomnia. These are the two principal points he brings out. He made no mental examination, and so he declares. He prescribed nothing for him except some bromide. Then, coming on toward the end of March (he had seen him during these months and had made no examination), I realize fully the statement he makes that he advised Mrs. M. to send him to a sanitarium and he stated that he took this action on the advice of Mrs. M. He is quite careful to state that in his evidence.

By Mr. S., of counsel for plaintiff:

Q. Now coming to Dr. T.'s evidence?

A. Dr. T. sees him in March, presumably the week of the 5th of March, or, say, during the first two weeks of March. He also states that he made no mental examination. His examination was directed to Mr. M.'s physical condition rather than to his mental condition. He states that Mr. M. had an idea that he had lost his property and that he had ruined his son. I cannot quote the exact words, but this would be the substance of it. Dr. T. states that he cannot tell whether this condition was permanent or transitory, but he makes the very significant statement later on that the case developed during the months of May and June. Now these are the statements of Dr. S. and Dr. T., and these statements go to show that the man was depressed, suffering from worry, which is quite normal under the circumstances. I attribute this, of course, to the fact that his son was ill, and that the property of the son—quite large amounts as given by the evidence—was in a somewhat

A. I think so. As I say, that probably plus some worry. I don't know what it would be at all. The condition of arteriosclerosis tends toward mental enfeeblement.

Q. Inevitably?

A. Inevitably.

Q. Insanity, I presume, has many different forms?

A. Oh, many.

Q. Are they classified at all?

A. They are. Too much so, very often.

Q. When you use the expression, "melancholia," that is one of the classifications?

A. Yes, it is one.

Q. It is the one into which you put this particular case?

A. Yes. As I say, there are several forms. You might divide melancholia into a number of forms, but, ordinarily speaking, it is melancholia.

Q. It is that form of insanity which is known among scientific men as melancholia?

A. Yes.

Q. How does it affect a patient with regard to his capacity for doing business?

A. I should think it would affect him deleteriously.

By the Court:

Q. What do you mean by "deleteriously?"

A. That is giving a general opinion. I think any man suffering from melancholia could not make as fair a judgment as an average man. Of course, I cannot say anything at all positively as to Mr. M.'s judgment prior to my seeing him. I can only judge that this disease had made slow progress, and, in my opinion, must have existed for

embarrassed condition. It is only normal that a man under these circumstances should be in this condition of worry.

Q. What conclusion do you draw from the evidence of Dr. S. and of Dr. T., presuming that all the facts they state are correct?

A. The conclusion I draw from the evidence of Dr. S. and Dr. T., after giving every possible consideration to it, is that during the months of January, February and March, 1912, Mr. M. was suffering from worry and anxiety, due to the condition of his son and his son's affairs, and that he was not insane.

Q. Assuming that Mr. G. M. did make the statement on different occasions that his family was ruined, and his son was ruined, and that he was ruined, prior to the first week of March, 1912, does that, in your opinion, indicate that he was insane and incapable of appreciating any of these transactions with W. M.?

A. No, I don't think so, because it is quite natural that at these times he would be suffering from extreme depression and anxiety with these facts in his mind. He might very well feel, and very naturally feel, very much depressed and would therefore probably give expression to rather exaggerated ideas of depression.

Q. Presuming that on one occasion, about the end of February, Mr. G. M. did make a statement to his wife that the best thing would be for the three of them to die together, does that, in your opinion, indicate that he was suffering from continuous and progressive melancholia, and that he was unable to appreciate his actions?



months, or probably a year or more, before he came into my care. Of course, that is only a supposition. I can only speak of the man as I found him.

Q. Do you conclude from the condition in which you found him that that disease must have existed for a year?

A. For months before.

Q. Six months?

A. I should think more. I do not think that that condition of arteriosclerosis could have originated in six months.

Q. During that time—six months—would that patient be in an ordinary, normal condition to transact business?

A. Ordinarily speaking, I should think not. In this special case, I cannot say.

Q. What has been the conduct of the patient since your return—can you speak of that personally?

A. He has been a case of melancholia, with all manner of delusions, to the effect that he was ruined, and his family was ruined; that he was to be arrested and put in prison, and that he was to be tortured in all sorts of ways. These were the original symptoms when I saw him first. Prior to that, of course, there was a number of things of which other witnesses can speak. I am only speaking of my own personal knowledge. That was his condition when I first saw him, and that condition has continued, and continues to-day.

Q. Does it get better or worse?

A. If anything, worse. There is a tendency towards what we call "feeble-mindedness."

Q. According to your experience and observation, at the time you

A. No. I would not say that. He might make that same statement if he was quite depressed, owing to the condition of his son. If he felt that his son was dying, he might make use of the expression that it was better for all three of them to die together. However, you must follow that by his actions subsequently. He had plenty of opportunity during the following month, if he was determined to suicide, to do so. That would be before he was interdicted, but he did not do so, as far as I can read the evidence.

Q. What I want to know is, if a person suffering from the disease which you found G. M. suffering from, can at times or on certain subjects behave rationally and talk rationally?

A. On certain subjects? Do you mean on certain subjects or rationally at all, at any time?

Q. I mean can he conduct himself rationally, eat, drink, and go to bed, and do all that kind of thing, like an ordinary person?

A. If a man has a condition of melancholia, while he is ill with that disease, he does not conduct himself rationally on all subjects, no.

Q. I did not say on all subjects. I said on any subject?

A. Yes. My answer is that a man with melancholia may intelligently discuss many things.

Q. Is it not a fact that patients suffering from melancholia and depression and delusions, as you have described it, might deceive an ordinary person as to their condition, or might dissimulate their condition, and deceive persons who are not experts as to their delusions?

A. You are quite contrary to the facts. They magnify enor-

first saw the patient, had the disease made marked progress?

A. My conclusion, when I first saw the man, was that the disease must have existed for quite a lengthy period beforehand. I could not just say how long. Of course, I might be wrong, but that would be the conclusion I would draw from the condition of the man—that the disease must have existed over months and months previously. That is the conclusion I would draw as a medical man.

Q. According to your observation, for what length of time had the mental condition of the patient existed at the time you saw him?

A. It is impossible to say definitely, but in my own opinion (although I cannot say definitely) he must have been insane for months before. In my opinion, I have no doubt of it. Of course, I cannot say positively. It is only an opinion.

By the Court:

Q. That is, months before you saw him in the month of August?

A. Months before I saw him in August. Of course, I could not say any definite, fixed time.

By Mr. S.:

Q. Is that according to your experience?

A. That is according to my experience.

Q. I presume you have had experience in many similar cases?

A. Probably some thousands.

Q. Is it according to your experience that the disease with which G. M. is afflicted is continuous and without intermission?

A. It is continuous and progressive—both according to my own observations, and from the weight of

mously their condition, and their hypochondriasis. They never hide their condition. They do not try to hide their case at all. They give it away too much.

By the Court:

Q. At the present time, can this man converse with apparent good sense on some subjects?

A. On some subjects. For instance, he talked to me over the early history of his life in N. B., and told me how he tramped the rivers from there, and he knew a great deal about the geography of it. He told me, to my surprise, that his son, R. M., was a cadet at the K. Military College when he learned that I was from K.

all authorities I have read at different times. It is continuous and progressive.

Q. How does arteriosclerosis affect the brain?

A. By the changes in the circulation. The smaller blood vessels become thickened and the larger ones become what we call calciform—that is, deposits such as lime come in the coats, and they get thickened, so that the circulation in the brain is markedly affected, and this increases all the time; finally, if the patient lives long enough, it leads to what we call dementia.

In rebuttal:

Q. Dr. U., you have already been examined in this case?

A. Yes.

Q. Were you present yesterday when the medical experts for the defense gave their evidence?

A. Part of the time. I may say I have not read any of the evidence at all, thank the Lord. I did not have to. I heard part of the evidence yesterday.

Q. The opinion was expressed yesterday by one of the medical experts for the defense that it was not possible to discover by examination of the patient whether he is suffering from cerebral arteriosclerosis or not. Do you agree with that? You understand, I do not mean any patient in particular?

A. I do not agree with that entirely. For instance, if I find a man with marked arteriosclerosis in the radial arteries, there is a strong suspicion in my mind that that arteriosclerosis extends more or less all over the body, including the brain. If I find, then, there is marked arteriosclerosis of the tem-

poral arteries, then I am still more confirmed in my belief. Then, if the man has attacks of dizziness—almost semi-paralytic attacks—I would not hesitate to diagnose cerebral arteriosclerosis. I might be wrong, but that would be my opinion as a medical man.

Q. Suppose cerebral arteriosclerosis does exist, does it constitute an organic lesion of the brain?

A. Certainly. Not of the brain substance, but of the brain as a whole.

Q. What is the effect of that?

A. The effect is to weaken a man's intellect all through.

Q. Would that be a curable condition or an incurable condition?

A. Absolutely incurable.

Q. There is no going back?

A. No going back.

Q. It has been sworn to here, in the medical evidence for the defense, that the condition of a patient suffering from melancholia is at all times apparent, and that it is impossible for the patient to conceal it or dissimulate it. Do you agree with that or not?

A. I do not. I could cite you a score of cases of marked melancholia confined in an asylum where I would defy anyone, for days, to say it was a case of melancholia. I do not agree with that opinion at all.

Q. Are you speaking now from your personal experience in the asylum?

A. That is my personal experience, extending over forty years, and covering perhaps 8000 or 9000 cases.

Cross-examined by Mr. G.:

Q. Do you suggest that this particular melancholiac G. M. dissimulates?

A. No; I don't think so.

Q. And that was the meaning of your answer to Mr. S.?

A. That is the meaning of my answer to Mr. S. He might appear to be sane for a time, but no insane man can imitate sanity. If I may be allowed to say it, an insane man might pass muster for a time as a sane man. I can cite you dozens of cases.

By the Court:

Q. Could a man suffering from melancholia meet old friends, for example, and be able to converse with them about the affairs of his childhood, and of his former life, in apparently a perfectly rational way?

A. It is quite possible. I have known a number of cases of the kind in my own experience. Of course, he could not do it for any extreme length of time, but I have known cases of melancholia go for a day or two, or perhaps a week, brightened up so that they would be apparently sane. However, at the same time they were insane.

Q. With a melancholiac there is usually some delusion or apprehension?

A. Usually.

Q. When there is such a delusion, is it the tendency of the melancholiac to give vent to that delusion in speaking of his friends and companions?

A. I think the tendency is that way. On the other hand, the melancholiac sometimes has the power to restrain himself to a large extent. Probably his will power is not lost entirely. Of course, the tendency is to talk freely about his delusions, but, if something else comes to his mind, he has the

power to control himself to a certain extent and not give expression to the delusions. I have seen scores of cases of that kind. As I say, I have probably had 8000 or 9000 or 10,000 cases of insanity to deal with in my experience, and I know they can control themselves to a certain extent, and appear absolutely sane.

DEPOSITIONS OF DRS. V. AND X.  
DR. V.

Examined by Mr. H. J. E., of counsel for plaintiff:

Q. How many years have you been practising medicine, Dr. V.?

A. Since 1883, 30 years.

Q. I understand you have made a specialty of mental diseases?

A. I have.

Q. How long have you been engaged in that special work?

A. About twenty-six years.

Q. You were connected with one of the hospitals for the insane here in Montreal?

A. I am.

Q. Which one?

A. The ——— Hospital.

Q. Is that a large hospital?

A. It is.

Q. About how many patients would you have there under treatment at a time?

A. I was looking up the records the other day, and we had altogether, public and private, about 2300 cases.

Q. Did you have occasion to visit and examine G. M., now confined in the Verdun Asylum?

A. I did.

Q. When did you examine him?

A. A week ago last Sunday. November 30, I think it was.

DEPOSITION OF DR. D.

Examined by Mr. S. L. D. H., of counsel for defendant:

Q. What is your present position?

A. Superintendent of the ——— Sanitarium, ———, Ontario.

Q. What has been your experience with mental diseases?

A. I graduated in Toronto in 1890. I spent two years in general medicine, and from that time on I have been continuously in mental work. I spent ten or eleven years in ——— Asylum, and the balance of the time at ———.

Q. What sort of people do you treat at ———?

A. At the ——— Asylum we treated all mental diseases. At the ——— Sanitarium we have all classes of patients.

Q. What is the size of the ——— Asylum?

A. The ——— Asylum has about 1000 or 1100. In the ——— Sanitarium we have a capacity of about 130.

Q. I understand you examined G. M. a short time ago?

A. December 11, 1913.

Q. Did you find him suffering from any mental disease then?

A. I found him suffering from melancholia, with delusions.

Q. Will you please describe to the court the condition in which you found him on your examination?

A. I found him suffering from profound involuntional melancholia. His depression was very, very marked. He was overcome by an intense idea of ruination. I found his memory very much affected. He could not tell me the date nor the year. He could not tell me how long he had been in the institution. He was under the impression that his wife was in an adjoining part of the institution and he had certain expressions that he made use of in the course of the conversation quite characteristic of melancholia of involuntional, such as "My God"! "My God"! At times in all of these cases, even in the advanced stages, there is a certain amount of coherency of thought and they can answer questions and their answers taken by themselves are quite coherent.

Q. From your examination at that time, and from your examination alone, were you able to form any opinion as to the date when this disease had its beginning?

A. Taking his case, independent of any legal connection, but in the ordinary run of my experience, I should say from the enfeeblement I noticed in his memory I would naturally come to the conclusion, as I have in many other cases which I have observed, that the disease had an antecedent history of quite a duration of time.

Q. Have you been present in court during the hearing of this trial?

A. Yes.

Q. Did you hear the evidence of Dr. W.?

Q. You have, I understand, read all the evidence which has been given at the trial?

A. Yes. I heard part of it and I read it all.

Q. From the evidence and from the documents filed which you may have read are you able to form an opinion as to the sanity of Mr. G. M., the father of the plaintiff, during the months of December, 1911, and January, February, March, 1912?

A. I consider he was sane.

Q. During these months?

A. During these months.

Q. Basing yourself on the evidence and the documents filed, what in your opinion was the mental capacity of G. M. to appreciate the nature of his transactions with Mr. M. which are referred to in this case?

A. He was mentally capable of doing it.

Q. That is your opinion?

A. That is my opinion.

Q. Do you mean that he was naturally capable of appreciating it?

A. Yes.

Q. Would you consider from the evidence you read and from the documents you read that G. M. was suffering from confirmed melancholia (which I understand is continuous and progressive) during the months in question?

A. No.

Q. What are your reasons briefly for the opinions you have expressed regarding G. M.'s condition during these months of January, February and March?

A. Well, as from the evidence as given by Mr. W., his solicitor, who

A. I did.

Q. And Dr. S.?

A. Yes.

Q. And Dr. T.?

A. Yes.

Q. Assuming that the facts recited by these several witnesses are correct, have you in these facts a basis upon which to form an opinion, and if so, will you state to the court what that opinion is as to the date of the commencement of this disease in Mr. M.?

A. Assuming these facts to be true, I am of the opinion that the man was insane for quite a period of time prior to his commitment to the Verdun Asylum. I would be of the opinion that the man was insane in the month of January or February positively.

Q. 1912?

A. 1912.

Q. What is the character of this particular disease? By what name would you term it?

A. In later years we have adopted for the time being only, as a quasi classification of insanity, the German classification, and such conditions as are observed in the case of Mr. M. we place in the category of melancholia of involution. This is a disease characterized by uniform depression, accompanied with fear. It is, however, accompanied by distinct delusions, self-accusations, and self-depreciation of a persecutory nature and of a hypochondriac nature, with disturbances in the train of thought, and in the vast majority of cases it ends up with deterioration of the brain. There is a certain percentage of cases which are considered to recover, but they are very small.

saw him frequently in these months—between December and March—and who transacted business for him. Mr. W. drew up certain documents, and he states in his evidence that Mr. M. insisted on and directed certain changes in these documents, and that he was capable of understanding them. Mr. W. also says that he did not notice anything unusual in the man at the time. That is one of my reasons. Another reason is that he performed certain business transactions during these months, as evidenced by the deposition of Mr. D., who told us what Mr. M. had done with reference to the dredges. This is also evidenced by Mr. B., whom Mr. M. advised in regard to some farm lands, and by the evidence of Mr. P. in regard to the purchase of some real estate in Montreal. I consider all this evidence is good evidence of the man's mental condition and capability of doing business at that time. He also met many witnesses upon the streets in Montreal, who knew him well. He met them in the different hotels, the Corona, the St. Lawrence Hall, the Windsor Hotel, and so on. They had conversations with him and they stated that they noticed nothing out of the way in his actions or speech. A little more important is the evidence of men like Mr. S. and Mr. J., both capable business men, who impressed me here in the witness box as being straightforward business men. They saw Mr. M. frequently during the same months and had conversations extending from ten minutes to an hour with him at different times. They knew him intimately and they stated that they



Q. From the history of this case, do you find any evidence of intermission in the disease, or was it continuous and progressive?

A. In my humble opinion there was no intermission; simply a progression of symptoms.

Q. So that, assuming as a matter of fact that this disease existed in January (or certainly in February), in your opinion was the man insane from that time on?

A. It is my opinion that from that time on he was insane.

His Lordship: From what time on, Mr. E.?

Mr. E.: From the month of January, 1912, my Lord.

By the Court:

Q. Is that what you mean, Dr. V.? Is it your opinion that he was insane from the month of January, 1912?

A. Yes, my Lord; from towards the close of the month of January.

Cross-examined by Mr. H., of counsel for defendant:

Q. Will you tell us exactly what you mean by "insane?"

A. I would say that the man was deprived of the power of exercising his common sense.

Q. You consider he was deprived of the power of exercising his common sense since January?

A. I would say that he was deprived of the exercise of his common sense. I might specify more clearly by saying in matters involving the higher relations in his life.

Q. What do you mean by the "higher relations?"

A. Passing judgment upon matters of importance to himself and those connected with him.

Q. Will you tell us exactly what were the facts upon which you base

saw nothing wrong with him in his actions or his reasoning power. They did not notice anything out of the way. Then, evidence is given of certain documents or letters that he wrote in reference to business matters during these months. These documents show fairly clear reasoning. We also have the evidence of Mr. S., an independent lawyer, who occupied adjoining offices to Mr. W. Mr. S. saw him frequently during the same months. He did not have any business transactions with him whatever. I think he was absolutely independent in his opinion. He stated he saw nothing wrong with Mr. M. during that time. In the converse we have the evidence of Dr. S. and Dr. T. and the sanitarium nurses, who saw him during the same period at certain intervals. They stated he was very much agitated, suffered from insomnia and they noticed a number of conditions which I consider were, at that time, the natural anxieties of a man suffering from stress and worry. That is my own evidence in regard to his condition. He was anxious and worried over his son's business and his own affairs at the time.

Q. Assuming that on certain occasions prior to the first week of March, 1912, or about that time G. M. made statements to the effect that he was ruined or that his family was ruined or his son was ruined (as stated in the evidence), would that in your opinion indicate that he was insane and incapable of appreciating the nature of these transactions with Mr. M. and Mrs. M., referred to in this action?

A. This man was under great stress and strain at the time, and,

the opinion that he was insane in January?

A. In the first place, I base myself upon the fact that in melancholia there is a delusional state which differs from the delusional states observed in other forms of insanity. That is to say, the delusional state of ruin or depression is of such a character and such an intensity that once it takes a hold of the individual attacked it dominates his whole psychic being, even without there being anything in his external appearance or in his conversation to cite the fact in particular. While I do not feel that any close observation, such as we ordinarily make of a patient coming under observation, was made, still there was a sufficient examination made, and the description of the examination as given by Dr. T. was a very classical presentation of a case of melancholia of that character, as it would appear in the wards of our asylum. The manner in which Dr. T. described his interview with the patient, his downcast appearance, his state of torpor; when put a plain, ordinary, sensible question as to what was the matter with him he could not describe it except as that of a condition of ruin. The very words he used are typical of these cases—"It is terrible." "It is terrible." These are the words that a melancholiac would use. It is a vague expression, if you will, of the profound disturbance of his mind.

#### DEPOSITION OF DR. X.

Examined by Mr. L., of counsel for plaintiff:

Q. For how many years have you been practising your profession?

I believe, was in a fair way to lose a large amount of money. It appeared to the man, who had worked very hard in times gone by, that this looked as if the commencement of ruin was upon him, and that it might go on. He expressed these delusions especially when he was in the hospital, in contiguity to his son, who was very ill. I consider these were normal anxieties at that time.

Q. In giving your opinion, do you bear in mind the statement he made on certain occasions as to ruin, or the statement made by Mrs. M. that on one occasion he said the best thing would be for the three of them to die together?

A. I think in his normal mind he might give expression to a thought of that kind when they were suffering. At a certain time he might give expression to the idea that the best thing to do would be to die. I have known normal men give expression to the thought that they wished to God they were out of the world, or wished they were dead, or something like that.

Q. You have borne these facts in mind in giving your opinion?

A. I include them together with the fact that he met these intelligent people at different times on the street and never expressed these ideas to them at all, which, undoubtedly, he would have done if the disease of melancholia were established at that time.

Cross-examined by Mr. S., of counsel for plaintiff:

Q. May a person be insane with that form of insanity known as melancholia and yet perform the usual acts of life in the usual way?

A. It depends again upon the delusion that he may have.

A. Since 1889.

Q. Have you made a specialty of the study of certain diseases?

A. Yes, sir. Since 1894 I have been occupying the position of Medical Superintendent of the ——— Hospital for the Insane.

Q. How does that hospital compare with others in the Province of Quebec for importance?

A. I think it is the largest asylum in the Province of Quebec, and I think about the second largest in Canada, if not the largest.

Q. You have been there since 1894?

A. Yes.

Q. Did you ever examine Mr. G. M., who is in question in this case?

A. Yes, sir.

Q. Will you say on how many occasions?

A. I examined Mr. M. on the 28th of February last, 1913.

Q. At the request of whom?

A. I examined him at the request of Dr. Y., who sought my opinion as to Mr. M.'s condition at the time, and as to whether I could form an opinion in regard to his condition for some time previous to that.

Q. Let us deal with the marks whereby you recognized this form of insanity which you call melancholia. What were these marks?

A. At the time I found Mr. G. M. a patient in the Verdun Hospital for the Insane. He was in a great state of anxiety and was suffering from delusions of a depressing and terrifying nature. He was also suffering from hallucinations of hearing, also of a depressing and terrifying nature.

Q. Starting from what you found on the 28th of February, and adding

Q. If we leave aside the question of the remissions and come back to the question I asked you, I would like you to inform the court whether persons recognized to be insane with that form of insanity known as melancholia may perform all the usual acts of life in the usual way?

A. Again I must answer it depends upon the intensity.

Q. I am not speaking of the intensity at all. I am speaking of persons who are recognized as being insane?

A. I am speaking of the same people.

Q. So that, according to you, persons recognized to be insane from melancholia may perform the usual acts of life in the usual way?

A. Under certain circumstances.

Q. I am speaking of any patient suffering from melancholia. I am not speaking of all patients.

A. It depends on the intensity. In the remissions the disease still exists, but at these times they may, and do, direct one in carrying on certain business, in ways which are perfectly justified and perfectly clear.

Q. During these remissions, are they sane or insane?

A. They are insane; the depression still exists.

Q. Is it not a fact, Dr. D., that a patient so afflicted may converse for a considerable length of time without betraying his condition?

A. Not in my experience. They worry the life and soul out of me every day. It is hard to get away from them. They will persist in talking about their delusions.

Q. Is it not a fact that in an unlimited number of cases the patient

to your own findings those of Dr. S. and Dr. T., at the respective dates they have mentioned, and also the evidence of Dr. U. and Dr. W., would these findings and these facts constitute a previous history of the case sufficient to complete your conclusions as to the duration of time during which this disease had pre-existed?

A. Yes, sir.

Q. Taking these findings and these facts in conjunction with your own observations on the 28th of February, what conclusion have you reached as to the time during which this disease probably pre-existed?

A. I would date it at least as far back as December, 1911, and would say that it was continuous and progressive since that time.

Q. When you say "progressive" I suppose in matters such as this it is merely a figure of speech, because it is progressive the wrong way. It is an aggravation really?

A. Yes. "Progressive" means aggravation.

Q. Now, Dr. X., you are not a business man?

A. No. I have no time for that.

Q. But you have made contracts. Apart from the contract of marriage, of course?

A. I never made a contract in my life. I never did anything but study medicine.

Q. You know what a contract is?

A. Yes; sure.

Q. Would you believe that a man laboring under this disease of melancholia, the presence of which was detected as far back as December, 1911, and which became graver up to the month of March, 1912, would

will converse for a certain length of time without referring to his delusions at all, unless his attention is called to them? That is to say, as long as you keep the patient on indifferent subjects he may be perfectly sane, to all outward appearances, but as soon as you approach him on the subject of his delusions then he is persistent and the delusions become predominant and paramount?

A. My experience is, with friends constantly visiting the patients, they are always harping on their delusions. The friends are constantly telling me, "Well, So and So will persistently talk about his ruin," or whatever the delusion may be. My experience has not been with strangers, but with the friends of the patients. These people persist in talking to their friends about their delusions.

Q. So that you would give it as your definite opinion that patients afflicted with melancholia must always betray their condition to persons with whom they are in conversation?

A. Particularly friends and relatives.

Q. According to your experience, how long would the disease have existed in this man before he was committed on July 15?

A. In May and June. I agree with Dr. S. and the evidence of Dr. T., and the fact that in that month he noticed a change.

Q. So that, in your opinion, he was insane as far back as May, 1912?

A. Yes; the end of May.

Q. You will not go back any further than that?

be able to exercise his judgment and mental faculties for the purpose of transacting business, or entering into contracts?

A. No; certainly not.

Cross-examined by Mr. G., of counsel for defendant:

Q. Will you please specify to me the facts which you have seen in the evidence which have induced you to say that in December, January and February it was a case of confirmed melancholia?

A. I find there most of the symptoms which I found myself in February, 1913, and which gave me the opinion then that it was a confirmed stage of melancholia.

Q. I am asking you to specify these symptoms, which, according to what you understood or read in the evidence, existed in December, 1911, and January and February, 1912?

A. We find the man to have been in a great state of moral pain, anxiety and anguish, and that he had delusions that he had ruined himself and family. He was acting in a very excited manner and speaking incoherently, according to the evidence. This condition is stated to have existed in December, 1911. Then, we find these ideas repeated at frequent intervals by those who observed him in January, February, March, April, June, July, and so on.

#### DEPOSITION OF DR. Z.

Examined by Mr. S., of counsel for plaintiff:

Q. You are a practising physician in the City of Montreal?

A. Yes.

A. I cannot find evidence that would commit the man further back than that.

Q. Is the disease of melancholia one of rapid development or of slow development?

A. It depends on the case. Sudden shock will bring a patient into melancholia in a short time.

Q. He cannot be sane and insane at the same time of course?

A. No; he cannot be water and oil.

#### DEPOSITION OF DR. A.

Examined by Mr. S. L. D. H., of counsel for defendant:

Q. You are practising your profession in Montreal?

A. Yes.

Q. Since how long?

A. I graduated in 1901 in medicine and in 1897 in arts at McGill.

Q. Have you been practising in Montreal ever since?

A. No. I was two years at the — as house surgeon; then I went to the — Hospital in Baltimore for the better part of a year. Then I went to Europe and I had a year in Switzerland with Professor Von Munerhof, working in his laboratory. Then I was in various parts of Germany, Berlin, and so on. After that I went to Paris. Then I spent a year in London, at the National Hospital for the Paralyzed and Epileptics, where they make a specialty of diseases of the nervous system.

Q. If I understand you rightly, you have made a specialty of nervous diseases?

A. Nervous and mental diseases; yes.

Q. You visited Mr. M. at the asylum?

A. Yes.

Q. In what condition did you find him?

A. I have a letter which I wrote to Dr. Y. I think if I were permitted to read that letter to the court it might save time and convey all to you that I could convey by my evidence.

Q. Was the letter you are about to read written after your visit?

A. Yes. I wrote it that same evening.

The letter in question reads as follows:

MONTREAL, May 3, 1913.

MY DEAR DR. Y.: Re Mr. M., whom I examined in your presence at the Protestant Hospital for the

Q. Have you specialized in any particular branch of medicine?

A. Nervous and mental diseases.

Q. What is your experience in that regard?

A. I am lecturer on nervous diseases at — University. I am neurologist at the — General Hospital. I am consulting neurologist at the Hospital for Insane, —. I am professor of nervous and mental diseases, University of —, and have been for over twelve years. I was associated for some time with the — Hospital for the Insane. I am consultant for the Hospital of Mental Disease, —, Vermont. I was associated for some time with the Hospital for the Insane at —, England. I have been employed by the United States Government for many years as an expert for the criminal insane in the State of — and the State of —. I am neurologist for the — Railroad. I am a member of the — Neurological Association. I am a member of the — Association. I am a member of the — Institute for Criminal Law and Criminology.

Q. How long have you been practising your profession?

A. I graduated twenty-eight years ago.

Q. From where did you graduate?

A. — University, —.

Q. You say you are consulting physician at — Asylum. Is that the — for Insane at —?

A. Yes.

Q. With which Dr. U. and Dr. W., examined here on behalf of the plaintiff, are connected?

A. Yes.

Insane at Verdun, the 2d inst., I find that this patient is suffering from great mental depression, associated with delusions of a persecutory nature. Suicidal tendencies are evidently marked, also he has made more than one attempt on his life. He imagines that he has ruined his whole family by giving away money and also some contract that his son had. He has, he thinks, committed the great sin—he is lost. When asked why he gave away his son's money he answered that he did not know; he must simply have got a notion. He could not remember just when or where he had done it. Instead of a shrewd business man, his mind is now full of indecisions. He practically never makes a positive statement, and seldom ever gives a positive answer to a question. He has insane delusions and imagines that people are saying things against him of a horrible nature. He stated that everything he said to us was overheard because the room was wired and connected with telephones and all our remarks were noted down already somewhere. Examination showed paralysis of the movements, atrophy of the optic nerve, and blindness of the right eye, the result of an attempt at suicide with a pair of scissors. He has all the evidence of marked arteriosclerosis. I am, therefore, of the opinion that this patient is suffering from mental disease of the nature of an involuntary melancholia, associated with cerebral arteriosclerosis. In answer to the question as to whether this would have had bearing of an etiological nature on his peculiar action in giving away the money, one can only answer that it probably

Q. You are consultant for mental diseases at that hospital?

A. Yes.

Q. In your practise at the hospital and the different places you have described you confine yourself to nervous and mental diseases?

A. Yes.

By the Court:

Q. Has your work as a specialist been running for many years?

A. About eighteen years.

By Mr. H., continuing:

Q. I understand you have had occasion to examine G. M., the father of the plaintiff in this case?

A. Yes.

Q. At the Verdun Asylum?

A. Yes.

Q. On what date did you examine him, and what did you find him suffering from?

A. I examined him on the 11th of December, 1913. He was suffering from melancholia.

Q. You have read through the evidence given on both sides of this case?

A. I have.

Q. You have also read the letters filed as exhibits from G. M. to W. M., the defendant, and from Mrs. M. to M., as well as the other writings of G. M. filed in this case?

A. I have.

Q. Are you able to form any opinion, as a result of the evidence given and the documents filed as to the sanity or insanity of Mr. G. M. during the months of December, 1911, and January, February and March, 1912?

A. I believe he was sane.

Q. Is that your opinion as a medical man?

A. That is my opinion as a medical man.

did, but one would need corroborative evidence of some change in character, some peculiarity of ideas and actions present at the time. One of course recognized that the symptoms of cerebral arteriosclerosis may often come on almost acutely, following some shock either mental or physical, or as a result of mental strain. I would, therefore, urge the necessity of searching for corroborative evidence of the nature referred to.

With kind regards, I remain,

Yours sincerely.

Q. Did you or were you able to form an opinion as to how long the condition in which you found the patient had lasted?

Witness: Do you mean at the time of that examination or since?

Counsel: At the time you made the examination?

A. I could form no opinion from what I saw, except that it must have been present for some time. One could not say more than that.

By the Court:

Q. What would "some time" indicate? "Some time" is a general expression of course. As regards weeks, months, or years, what would you want the court to understand?

A. One could definitely say it had existed for some months I think; especially if one could take into account the history one got with the patient one could very positively say it had existed for some months.

Q. From what you knew at the time you went there to examine him?

A. From my examination of Mr. M. at that time I would say that the condition might have lasted for a

Q. And as a specialist?

A. And as a specialist.

Q. Basing yourself on the same evidence and the same documents, what is your opinion as to the mental capacity of G. M. to appreciate the nature of the dispositions of his property in question in this case, about February 21, 1912?

A. I think he was a sane man and perfectly capable of doing it.

Q. You consider he was capable of appreciating the nature of these transactions?

A. I do.

Q. Would you consider from the evidence and documents on record that Mr. G. M. was suffering from confirmed melancholia (which is a continuous and progressive disease) during and throughout these months?

A. He was not.

Q. Will you give us briefly some of the reasons for the opinions you have expressed in regard to Mr. G. M.'s mental condition?

A. To make it brief, I may say that I agree thoroughly with Dr. E. and Dr. C., Dr. D. and Dr. B. I agree with what they have said in connection with the different witnesses who came up from Dalhousie and who were residing in the neighborhood of Montreal.

Q. Do you agree with the reasons they expressed with regard to their opinion as to the mental condition of G. M. during the time in question?

A. Yes. I also agree with them in their opinion as regards the nurses in the sanitarium—that at no time was a delusion demonstrated or ever shown to be a fixed delusion. I think that, as the court



couple of years or it might have lasted for a less period. One could not make a statement, as I said in that letter, as to how long this had lasted. One could not judge from one's examination.

Q. Did you hear the evidence which had been given in this case by other specialists and by those intimate with the patient?

A. I heard Dr. W.'s evidence and I heard the evidence of Dr. U. I also heard the evidence of Dr. S. and Dr. T.

Q. Does that enable you to form any more definite opinion with regard to the time this disease may have lasted?

A. I think it does; yes. Dr. S. gave evidence that in January the man was suffering from insomnia, mental indecision, and that he was worrying and showed lack of concentration. This was in January. Now, in February and March Dr. S. recommended that they should send him to a sanitarium for mental diseases. Evidently he had progressed backwards a good deal. In June Dr. S. had to bring him home from the corner of Peel street. This man was then standing in the middle of the street in a state of mental confusion. On July 11 he had definite delusions. Then, as far as I know, he was a man quite well off, but at the same time he was going around asking everybody for ridiculous positions. I mean to say he was asking for positions that were ridiculous, taking into account his position and his age. Imagine a man of his age volunteering or thinking of climbing telegraph poles. He was a man who had managed big business affairs,

stated yesterday, we may apparently be taking sides, and to offset this, I believe we should lay particular stress on that part of the evidence where no outside influence can be brought into play. That in particular would be the letters written by Mr. M. during that period. They speak for themselves. These letters relate to certain business transactions which have been shown to be carried out and which were, in my opinion, carried out in a very correct manner. If G. M. was able to undertake journeys, considerable distances from Montreal and carry out business on these journeys—if he was able to go, in the spring of the year, some hundreds of miles alone, down to Dalhousie and come back again, to my mind this clearly demonstrates that the man used his will power and his judgment and nothing in his conduct in any way showed that he was suffering from an insane condition. Dr. S., who saw him in December and examined him for the first time in January, says that at that time he was suffering from nervousness, agitation and depression. At that time Dr. S. did not see any symptoms of insanity. It was not until about the beginning of March, when his attention was drawn to Mr. M.'s condition by Mrs. M. and the statement was made with regard to the revolver, that he thought it was necessary to advise a sanitarium. Dr. T. saw him about that time and made an examination. He states he paid particular attention to M.'s physical condition. At the same time he mentions that M. did show some nervous states, but that he did not make a mental examination. I was

and he had made a success of things. I think any idea of this kind showed decided mental deterioration at that time.

Q. What about his will power, Dr. Z.?

Witness: What do you mean by "will power?"

Q. There would be marked enfeeblement of the power of the will, so as to act independently of others, or would he be subject to being influenced by the will of others more than he would in his normal condition?

A. He would be uncertain in undertaking new lines, but in regard to actions that were caused by his delusions, he might be very obstinate. He would, perhaps, be dependent upon the help of other people in undertaking new lines, and new thoughts, and new ideas, and new affairs—he would feel his own enfeeblement.

Q. From the personal examination you made of the patient at the time, could you say whether arteriosclerosis that he had was known as cerebral arteriosclerosis or not?

A. Oh, yes. He had definite evidences of cerebral arteriosclerosis.

Cross-examined by Mr. D. H., of counsel for defendant:

Q. I suppose that before you examined Mr. M. you were told something of his case, were you not?

A. Oh, yes, of his case.

By the Court:

Q. Do I understand you to say that very few people whose minds are affected are free from insomnia?

A. No, my Lord; I did not say that. I say there are very few people suffering from insomnia whose minds do not become affected, more or less of course.

not present during the examination of Dr. S. or the examination of Dr. T., but there is a feeling to the effect that they stated Mr. M. was insane. I cannot think it possible, seeing that he was allowed his full liberty, and allowed to journey down to Dalhousie, and allowed to go around the hotels just as he liked. Dr. T. is one of our leading men in the City of Montreal, and a case of insanity would be treated by him like a case of diphtheria—in a case of diphtheria we naturally take precaution to save the individual and to save the people at large. In insanity we do the same thing. So far as I am concerned I cannot think for a moment that Mr. M. was insane in the months of January, February and March. True, he did speak about being ruined, or ruining his family. Dr. S. tells us about him being worried and stating repeatedly that he was ruined, yet he was known to give two thousand dollars to Mr. M. in April. He did not act like a man who had a delusion—a melancholiac. He certainly had nervous symptoms. He was agitated, depressed and emotional. I might say he was peculiar, but all alienists know that peculiarity in character frequently is present in those cases of people who develop melancholia later on. For these reasons and others I conclude that Mr. M. was a sane man in the months of January, February and March, 1912.

Q. Assuming that Mr. M. had been suffering from melancholia during these two months what would you say as to the possibility of persons with whom he came in contact during that period noticing anything about his condition?

Q. It is one of the initial stages of mental trouble?

A. It may be. It is not always.

Q. A man may have insomnia for a few months, and then right himself?

A. Yes.

Q. But if it be continuous?

A. A man may have insomnia from worry or from pain. You have to take the whole case together. Here is a man suffering from arteriosclerosis, and a very definite worry, beginning to suffer from constant insomnia. That is a very different and very serious symptom.

By Mr. H.:

Q. A man suffering from melancholia is not necessarily at all times incapable of appreciating what he is doing?

A. A man suffering from melancholia with mental deterioration is at all times under the power of his delusions.

Q. But there has to be mental deterioration also?

A. Well, even without mental deterioration, a man who is suffering from melancholia would be influenced by his delusions. Of course there are melancholiacs and melancholiacs. If we stick to the point as you know, this man was suffering from involuntional melancholia.

Q. That is when you saw him in May, 1913?

A. Yes; I have no doubt in my mind, from the testimony I have heard here, that in January, 1912, he also had it. I have no doubt he had it then. If we just stick to the point, I am perfectly certain that man was influenced by his delusions constantly from time to time, and he had mental deterioration at that time.

A. I think if a man is suffering from melancholia he could not meet his friends as Mr. M. did without displaying it. He could not meet friends from day to day, sometimes twice a day, and not manifest the symptoms of the disease.

Q. In giving your opinion do you bear in mind the facts (assuming them to be true) that Mr. M. did, on certain occasions, during these months make statements to the effect that he or his family or his son were ruined, or on one occasion he said the best thing would be for the three of them to die together?

A. Yes, I have borne that in mind. I believe a sane man might make a statement like that if he was worried as Mr. M. was by his son's condition and other things. He might very well do these things and not mean anything thereby, as the statements were not repeated time and time again.

Q. Would you consider the fact that G. M. was addicted to the use of alcohol would have any bearing on his making a statement of this kind?

A. I believe it would.

Q. In what way?

A. Well, he might be depressed from the effects of the alcohol.

Q. Does that occur?

A. Frequently.

Q. What opinion can you give as regards Mr. M.'s will power and the liability of undue influence being exerted over him these months?

A. I think his will power was perfectly normal.

Q. In addition to reading the evidence of the different witnesses in the case I understand you were present in court every day?

Q. What are the delusions to which you refer?

A. He had delusions that he was ruined, and that he had ruined his family. He had delusions that he was being persecuted and that he was going to be put in jail.

Re-examined by Mr. S., of counsel for plaintiff:

Q. The opinion you have given us, Dr. Z., is based on the ensemble of the facts which you have learned; it is not based on any one particular fact?

A. It is on the whole thing.

Q. Taken together?

A. Yes.

By the Court:

Q. The opinion you give is that this man was insane from the month of January, 1912?

A. Yes.

Q. And continuously insane from that time forward?

A. Absolutely.

His Lordship: The witness has taken notes and has given you certain opinions based on these notes. He took notes of what he considered important in the evidence of the different witnesses. He says these notes represent what to him was important, from his point of view, in the evidence of these different witnesses, and that he used these notes to base his opinion on. The result of his examination of these notes is that he has no hesitation in stating that the man must have been insane in the month of January, and that he never recovered his sanity. Is that correct?

Witness: Yes, my Lord; that is correct.

A. Every day with the exception of part of one day.

Q. From the commencement?

A. Yes.

Q. So you have also practically heard all the evidence from the witnesses themselves?

A. Yes.

Q. In fact, you have read through all the evidence given in the case in addition to hearing it?

A. I read it through quite a number of times.

Cross-examined by Mr. S., of counsel for plaintiff:

Q. When did you see Mr. M. at the asylum?

A. December 11, 1913.

Q. At that time was he sane or insane?

A. Insane.

Q. How long had he been insane

A. I could not say.

Q. You heard the evidence of the other expert witnesses, Dr. E., Dr. C., Dr. D., and Dr. B., to the effect that this man had been insane, in their opinion, since the month of May of that year?

A. From the evidence I had, it is likely.

Q. You heard the evidence of the other expert witnesses, Dr. E., Dr. C., Dr. D. and Dr. B. to the effect that this man had been insane, in their opinion, since the month of May of that year?

A. Well, I cannot say I did. I cannot recollect that. They may have said it or they may not.

Q. Do you agree with that or not?

A. Well, I don't know. They spoke about the condition of the patient developing in May or June. By that they may have meant that the disease started in May or June.

Q. Can you say whether in your opinion G. M. was sane or insane when he was confined to the asylum?

A. He was certainly insane.

Q. How long had he been insane previous to the 15th of July?

A. Well, it is pretty hard to say. He showed symptoms, as brought out by the evidence, before that. Dr. S. speaks about him losing himself and other things. It looks as if in May and June the disease was present.

Q. So that you are not able to say whether or not he was insane in the month of May?

A. I would not like to swear to it.

Q. But I would like to have your opinion and see whether you agree with these other gentlemen who were examined here and who said that in their opinion M. was insane about the middle of May?

A. I would not like to give a date.

Q. Have you any doubt at all that he was insane previous to July?

A. He certainly was insane before July.

Q. Before the 15th of July?

A. Yes.

Q. I think you have said that a person suffering from melancholia cannot hide his condition or dissimulate his condition for any length of time so as to deceive others. Is that right?

A. That is what I said.

Q. Then, how do you account for the fact that one of the principal witnesses for the defendant saw him on an average of fifteen times out of every month, that is to say, every other day from the beginning of the year down to the 15th of July, and never saw anything of the kind?

A. It may be he did not open his eyes or open his ears sufficiently. I cannot answer for him.

Q. But he says he saw him and conversed with him and talked business with him as frequently as on an average of every other day in the month, down to the time he was put in the asylum, and that he saw nothing unusual about him at all. How do you account for that?

Witness: Might I ask what witness that was?

Counsel: That was the witness McL. Did you read his evidence?

A. I must have. Who is Mr. McL.?

Counsel: Mr. McL. describes himself as an insurance agent.

A. Oh, yes; I remember all about him now.

Q. This witness saw M. right down to the time he went into the asylum, every other day on an average. He had conversations with him every other day, and still noticed nothing unusual about him. How do you account for that?

A. I cannot understand it.

Q. Was he telling the truth?

A. This gentleman must have lacked some quality of observation or as they were frequently meeting at the bar—I don't mean to say this in any bad spirit—they may have been taking some spirits. The only other explanation is that Mr. M. was a record case. I never heard or saw of a person suffering from melancholia who could discuss topics of this kind, as described, and still appear normal.

DEPOSITION OF DR. Y.

Examined by Mr. S., of counsel for plaintiff:

Q. Have you made a specialty of certain diseases?

DEPOSITION OF DR. B.

Examined by Mr. D. H., of counsel for defendant:

Q. Are you practising your profession in Montreal?

A. Of mental diseases for twenty years.

Q. This implies that you have made special preparatory studies?

A. Yes, sir. I entered the asylum of —, where I spent seven years of practice.

Q. You have been seven years there and afterwards you started to practice?

A. I make a practice of mental and nervous diseases. I am attached to the — Hospital, where I am consultant for all mental and nervous diseases, and for two years I have been attached as alienist for the Recorder's Court, to examine all patients that are to be confined in any asylum, at the expense of the government and the city.

Q. Doctor, regarding your report of the interviews with G. M., the 22d of February, the 28th of February and the 2d of May, will you enumerate what are the observations you made as a physician?

A. He (G. M.) appeared very depressed; talked with difficulty; questions had to be repeated before he would answer. Said he was ruined; that his family was ruined; that he was hunted; that they wanted to put him in prison and torture him. He heard voices. He imagined that there were detectives who were watching him; he heard them talking.

Q. Voices? Not yours; voices other than yours?

A. Other than mine or the employees or other patients in the hospital. These were hallucinations. This delirium of the first interview did not appear to me to be very coherent. It did not appear to be a delirium well organized. It

A. Yes.

Q. As a general practitioner?

A. Yes.

Q. You have also given special attention for some years past to the subject of nervous diseases?

A. I have.

Q. Will you tell us briefly what has been your experience?

A. Well, I studied a year in Europe, paying special attention to nervous diseases.

Q. Did you examine G. M., the father of the plaintiff in this case?

A. I did.

Q. On what date?

A. December 7, 1913.

Q. What did you find his mental condition to be?

A. I found him suffering from melancholia.

Q. Have you been able to form any opinion from the evidence and documents which you have read, and which are filed in this case, as to the mental condition of G. M., and his sanity or insanity during the months of December, 1911, January, February and March, 1912?

A. I believe he was sane.

Q. That is your opinion?

A. That is my opinion.

Q. What, in your opinion, based on the evidence made in this case, was the mental capacity of G. M. to appreciate the nature of the transfer made to the defendant of certain mortgages on or about the 5th of March, 1912, and the transaction by which he endorsed a certain note and receipts for bonds as described in this case to Mrs. M. on February 21, 1912?

A. I believe he could understand what he was doing.

Q. That is your opinion?

appeared to me as if he had already presented at that date fresh intelligence. I could not very easily connect the different delirious ideas.

By the Court:

Q. You say at the first interview?

A. From the first interview he appeared as having had a weak intellect. I came to this conclusion later, especially at the last examination, where he did not remember the length of time he had been in the hospital. He was not accurate as to facts, dates, or anything at all.

Q. What conclusions have you come to yourself?

A. That the sickness has existed a long time.

Q. Would you be able to state approximately how long the patient has been suffering from the sickness which you have observed?

A. The examination alone makes it difficult to give a precise date, but the state that he was in when I saw him gave the impression that he had already been suffering from a weak intellect, and would give one the impression that it had existed for a long time back. To arrive at the beginning of the disease and the weakness in intellect, I think one would have to consider or take into consideration the proof brought by other witnesses, who saw him at different periods of his life.

Q. Exactly; and this brings us to what has been stated by the testimonies which have been given here in court?

A. Yes.

Q. You have heard these testimonies?

A. Yes.

By Mr. L., of counsel for plaintiff:

A. That is my opinion.

Q. From the evidence adduced in this case and from the exhibits filed, would you consider that Mr. G. M. was suffering from progressive and continuous melancholia during these months?

A. No.

Q. Do you consider that if G. M. was suffering from continuous and progressive melancholia at this time this condition would have been noticeable to the various friends whom he met and with whom he talked during the periods as described in the evidence?

A. I believe it would have been. As far as I have seen in the evidence, the people who saw him depressed and with these ideas of ruin and so on saw him in the hospital, where he was in contact with his son, who was very ill and who was believed to be dying, or they were persons who had something to do with the business of his son, which was then in a very bad way, as far as the evidence shows. Of course, this was very depressing. At the same time, and on the same days practically, he would meet other people and appear in an ordinary mental condition.

Q. How many cases of melancholia have you had under treatment?

A. I don't know. I have had quite a few.

Q. How many?

A. I could not recollect.

Q. Surely you can recollect within five, or ten, or twenty, or twenty-five?

A. No.

Q. Did you have one?

A. Yes.



Q. Now, considering the intermittence or non-intermittence of this disease, which you have stated is present, what have you got to say?

A. In the disease G. M. suffers from there is no intermission. The disease is continuous.

Q. If you please, will you give me precisely what are the facts in this proof that bring you to this conclusion, in the proof that you have heard that the malady was of long duration?

A. There is what Dr. S. said who examined G. M. on the 8th of January, I believe, and he declares that Mr. M. had ideas of ruin at that time. He has the proof brought by Dr. T. who examined him a little later, and he declares that at that time he was insane. In January he commenced to want to look for a situation, pretending that he had need to work to support his wife and son, who were at the hospital. In December, from the 1st of December, I believe, he found himself absolutely incapable of regulating the affairs of his son.

Q. Have you had more than one?

A. Yes; I have had more than one. I see some of these cases in connection with the nervous clinic. We do not have the certified cases.

Q. You do not classify yourself as being an alienist, but you classify yourself as being an expert in nervous diseases?

A. We have mental diseases in the incipient stages, too.

Q. The nervous diseases form the greater part of your studies?

A. Yes.

Q. In cases where these patients can maintain their self-control and repress the outward expression of their symptoms do you believe they can maintain this self-control for any length of time?

A. Not for any length of time. I think that especially meeting old friends and talking over old times the delusions would come to the surface very quickly.

Q. Can you tell us how many cases of melancholia you have had under treatment and examination?

A. No, I could not.

Q. You cannot remember the number of cases?

A. No.

Q. Did you have two cases?

A. I have seen far more than two cases. I have seen many cases at the hospital.

Q. But I am not asking you that. I am asking you how many cases you have had under treatment?

A. I have had a certain number of cases in my private practice, and we have had many at the hospital.

Q. I mean cases of melancholia which came under your observation as a physician—under your personal treatment?

## DEPOSITION OF DR. W.

Examined by Mr. C. H. S., of counsel for plaintiff:

Q. Dr. W., are you an alienist?

A. My specialty is mental diseases and their treatment.

Q. For how long have you been such?

A. Ten and a half years.

Q. You occupy a position in the ——— Asylum?

A. Yes.

Q. What is your position?

A. Assistant Medical Superintendent.

Q. You were there at the time G. M. was admitted to the asylum, as explained by Dr. U.?

A. Yes.

Q. In the meantime, can you state from recollection on whose application he was admitted?

A. I am pretty sure it was Mrs. M., his wife, because her son was sick at the time.

Q. Who are the medical men who made the necessary certificates?

A. Dr. S. and Dr. T.

Q. Did you examine G. M. when he was admitted?

A. I did. I examined him within a few hours of his admission. It might have been the next morning,

A. Yes, I understand.

Q. How many have you had?

A. I have no idea.

By the Court:

Q. You could not say whether it was one hundred or one thousand?

A. It certainly was not one thousand.

Q. Would it be one hundred?

A. We certainly must have had one hundred showing melancholic symptoms.

## DEPOSITION OF DR. C.

Examined by Mr. S. L. D. H., of counsel for defendant:

Q. Have you specialized in any particular branch of your profession?

A. Yes; I have specialized in mental and nervous diseases.

Q. Will you give us briefly your experience in connection with these diseases as a professional man?

A. I spent four years in Europe, in Edinburgh, London, Paris and Vienna chiefly, attending the best hospitals there in this branch of work. I have had a private hospital of my own for the better part of twenty years; so in that way I have had an opportunity of studying and examining nervous conditions. I established a ward in the general hospital for nervous troubles, with the special intention of demonstrating the prevention of insanity.

Q. What class of patients do you treat in this hospital?

A. Nervous patients.

Q. What do you mean by nervous patients?

A. I mean patients suffering from psychical symptoms—in other words, patients suffering from mental symptoms, in the proper sense of

but it was within a few hours of his admission.

Q. Will you please describe to the court the condition in which you found him?

A. I found him very depressed and emotional. He spoke of suicide and claimed to have attempted it. Do you want all these details?

Counsel: Yes; we would like to have them.

A. He had the delusion that detectives were continually on his track. He stated that he had lost several hundred thousand dollars in poor business deals and that he was financially ruined. He was worrying very greatly over his son, who was seriously ill with typhoid at the time of his admission, July 15. His condition was one of marked mental anxiety and mental pain or depression, and I had not the slightest doubt after my first examination that it was a case of melancholia. The case was very evident.

Q. Was he sane or insane?

A. He was insane.

Q. Could you form any opinion as to how long he had been insane?

A. For one thing, on the papers that accompanied him the statement was made. . . .

Mr. G., of counsel for defendant, objects to the witness giving an opinion based upon what other doctors may have told him.

By the Court:

Q. Do you mean the statements of the doctors on the certificates?

A. Yes.

His Lordship: If the witness is going to base his opinion on the history as described by the other doctors, I think it is admissible. At

the word. I do not distinguish between psychical and mental symptoms indicating insanity. I do not take insane cases in my own hospital. My hospital is not for that, but for a previous stage of the condition.

Q. A pre-insane condition?

A. Yes, a pre-insane condition. Of course there are the organic diseases of the brain, and so on, which are part of the work, but, more largely, the pre-insane conditions have been prominent in my work for many years. I devote my time exclusively to this work. I do not do any general work or that kind of thing. I am a specialist in the proper sense of the word, so far as devoting all my time to these nervous and mental troubles is concerned.

Q. Do you have to deal with depressed or melancholic conditions?

A. Yes. I deal with both depressed and melancholic conditions.

Q. I understand you have examined Mr. G. M., the father of the plaintiff in this case?

A. Yes.

Q. At the Verdun Asylum?

A. Yes.

Q. When did you examine him?

A. On December 11, last, 1913.

Q. What was his condition when you examined him?

A. I found him in a condition of involutional melancholia with delusions.

Q. From the evidence, and from the documents filed, did you form any opinion as to the sanity or insanity of Mr. G. M. during the months of December, 1911, January, February and March, 1912?

A. Yes. I believe he was sane.

the same time, I will take your objection, Mr. G., and will allow the evidence under reserve.

Witness: On the papers accompanying Mr. M., or preceding him—the papers of commitment—it was stated by the physicians that mental symptoms had shown themselves in November, 1911, if my memory serves me correctly. From my own observation of the patient at that time, believing him to be a case of melancholia of his age and that type, to the best of my professional knowledge of that disease, I should say the mental symptoms had existed for some time before he came to us. I say that on my own knowledge, not on the history as given to me or as given to us by the examining physicians. I deduce that, from the man's condition, and the type of mental disease from which he suffered, his mental disease had existed for some time before he came to us.

By Mr. S.:

Q. One year?

No answer.

By the Court:

Q. What length of time?

A. Well, I must answer that to the best of my judgment in such cases. I could not state that, because it is impossible to say definitely; at the same time, from my knowledge of other cases, I should say it would have lasted certainly some weeks, possibly months, possibly three or four months.

By Mr. S.:

Q. That is, the condition in which you found him?

A. Yes, based on my own observation of his case as a type of mental disorder.

Q. That is your opinion?

A. That is my opinion.

Q. Basing yourself on the evidence and on the documents filed, what, in your opinion, was the mental capacity of Mr. G. M. to appreciate the nature of the transactions in question in this case?

A. Quite good as far as G. M. was concerned.

Q. Would you consider from the evidence in the case that Mr. G. M. was suffering from confirmed melancholia (that is, I understand a progressive and continuous disease) during these months?

A. I would not.

Q. Will you give us the reasons for the opinion you have expressed in regard to Mr. M.'s mental condition during the months in question?

A. You ask me why I would consider G. M. as being sane at this time. In order to judge of a man's sanity you first have to obtain his normal condition, as near as you can, in order to learn how much he deviates from that normal in whatever acts he may perform. What I think is an important item in regard to it is this: in looking over the evidence we find that G. M. was always subject to certain eccentricities and when crossed, for example, he would curse or swear, walk up and down and mutter to himself. We also learn that he was a practical joker; that he was a pessimist, that he always hesitated to begin business or undertake anything new; that he lacked confidence in his own business ability. These, I think, are a few of his peculiarities as they came out in the evidence so far. They struck me as bearing on the case particularly. He

Q. What, in your opinion, would be the effect of the condition in which you found the patient on his capacity for transacting business?

A. Well, if you put that as a hypothetical question, I should say he would not be in the full possession of his mental faculties. In all probability there would be an inability on his part to conduct his own affairs with the same prudence and judgment as he would before the attack came on or before any sign of mental disease manifested itself.

Q. Was his mental condition due to any physical disorder, as far as you could discover?

A. I think it was due to a combination of physical causes and mental causes. I would put down arteriosclerosis—disease of the arteries—as one cause, acted on by mental worry and grief over the illness of his son and possibly by other worries. I think the underlying cause was long-continued and progressive arteriosclerosis—arterial disease.

Q. Might I ask you a scientific question? Is there a physical cause for every mental disease?

Mr. G., of counsel for defendant, objects to this question as being irrelevant and illegal.

The question is allowed.

A. In certain forms of insanity there is a well-marked physical cause; in others a physical cause is suspected, but it is obscure and not proven to be the cause.

Q. Will you give us a little more detail as to the conduct of the patient after his admission to the hospital?

Mr. G., of counsel for defendant, objects to this question as being irrelevant and illegal.

was always inclined to borrow trouble, as a natural man. These conditions existed in this particular individual for a number of years—for instance at the time when he was a member of Parliament and was doing the business of the country. These were also characteristic conditions in the individual in later years. The next point I consider is the evidence of the doctors who saw him at the time. If we go into this medical evidence we find that Dr. S. examined Mr. M. early in January; that he found certain physical symptoms and certain nervous symptoms. Dr. S. found certain nervous symptoms—he found insomnia; he found inability on the part of the patient to fix his attention. He states that he answered questions slowly but correctly; that he was considerably agitated, and he spoke of ruining his boy. I believe these are all the symptoms Dr. S. mentions as a result of his examination in January. Of course, it is very hard to keep all these things in one's mind where there is such a mass of evidence, but I would like to feel that I had covered all the symptoms mentioned by Dr. S., because, being a medical man in charge of the case, one would naturally expect to place a great deal of weight upon his opinion. Dr. S. says he saw M. from time to time, but he made no further examination and that there were no new symptoms up to the time he left, just prior to March 5. There was no mental alteration in the man that Dr. S. considered sufficient to add to these symptoms at that time. Mrs. M. made a statement that Mr. M. had a revolver or threatened to shoot himself. Dr. S. says distinctly that if she had not

The objection is reserved by the court.

A. The patient continued to show this marked mental depression. He showed insomnia. He was restless. He refused his food frequently, because he stated it was tainted with human fecal matter, put in by his persecutors. At one time, about a month after his admission, I think it was in August—he attempted to suicide by driving a pair of scissors which he clutched suddenly into his right eye. They penetrated several inches and resulted in loss of vision in the right eye. Of course, we watched him very carefully after that, as we considered him then to be dangerously and actively suicidal. From that time on until the present he has shown a deterioration in every way, with a persistence of these depressing delusions of various kinds, and delusions of a persecutory character. For instance, he told me to-day that he was to be taken and exhibited through Philadelphia and Chicago as a terrible example of human guilt; that he was to be made to eat manure on the main street of Montreal. I just mention these to show you that his delusions are of a very horrible, terrifying and depressing character.

Q. What is the condition of G. M. at the present time?

A. His condition is one of involutional melancholia, verging into presenile insanity, and with certain signs of general mental and intellectual deterioration.

Q. Has there been any time since his admission to the hospital in which you would say he was better?

A. Absolutely no.

Q. Has there been any time in which you would call him sane?

made that statement he would not have considered him insane, or advised his going to an asylum. Dr. S., in the earlier stages, did not have any apparent anxiety as to this man's mental condition or as to his being insane, otherwise, he would have suggested a consultation, which is a very natural and ordinary thing to do. There is no evidence of his having done this. He prescribed for M.'s sleeplessness, which he said was the main cause for which he had examined him. I think it is clear that with no change in his mental symptoms, or nothing new in his mental symptoms (which I believe are the exact words used by Dr. S.), there was not sufficient ground in them to consider him insane. We now come to Dr. T.'s evidence: When Dr. T. took the case over from Dr. S. I presume Dr. S. would give him some history of the condition; in other words, would tell him what he had found on previous occasions and what the conditions were, so that Dr. T. would not have to go to the trouble of determining for himself the previous condition of the plaintiff; that he would have a history of the case from Dr. S. This is the usual practice and I think it is a fair inference to say it was done in this case. Dr. T. examined the general condition of the patient. He says he has no recollection of making an examination from a mental point of view. If Dr. S. had said to Dr. T., "This man is insane," surely Dr. T., with his experience in everything and with the practice he has had—if this man was in the position of a confirmed melancholiac—would have considered the mental side of it. However, the only statement Dr. T. makes in re-

A. No.

Q. Is his present condition in accordance with what you would expect from the nature of his disease?

A. Yes; it certainly is.

Q. Is it in accordance with what the symptoms as described by the doctors who gave their medical certificates for his admission would imply?

A. It is exactly what I would look for in melancholic symptoms appearing in a man of his age, with his history of alcoholism plus arteriosclerosis; yes.

Q. What is the effect of such a condition upon the capacity of the patient to transact business?

A. Well, insofar as his mind and emotions are dominated by these delusions, he is quite unable to form the same clear conception and judgment, because his mind fails to have the proper concentration that it had before and his judgment is not normal.

Q. What have you to say about his will power?

A. Well, his power of voluntary action and so on is affected by these delusions, as well as weakened or lessened—decidedly impaired.

Q. Does it make the patient liable to be easily influenced?

Witness: You might elaborate that question a little.

Q. I mean to be led or influenced by others.

A. Along the line of his delusions, possibly yes. In order to protect himself from these supposed persecutors he might be influenced quite easily along such lines, having delusions.

Q. If the patient's will is weakened in consequence of the disease,

garg to it is that he thought it was a mental condition rather than a physical one. He made no diagnosis—he said so distinctly—before the examination in July. It is true M. was depressed when Dr. T. saw him, and that he had a downcast look, and did not reply to Dr. T.'s questions, and spoke of the ruin of his family. This, however, did not impress Dr. T. with the man's insanity, or that he was even suffering from delusions. These were to my mind simply examples of the great discouragement under which the man was at that time, and Dr. T., I think very wisely, says that he cannot state whether that condition was transitory or permanent. As I say, that was the only examination Dr. S. or Dr. T. made prior to the end of April and this examination took place during the first two weeks of March. There is one important point, I think, in Dr. T.'s evidence to which I should refer, he having been there at the time and seeing the case subsequently. He expressed the opinion that the case developed in the months of May and June. That, from the physician in attendance at the time, who saw the patient constantly, was a matter which impressed me in regard to the evidence. Another important point, to my mind, was the number of witnesses of all classes of life who saw Mr. M. during the months in question—that is, December, January, February and March. We find members of Parliament, managers of large businesses, and so on. In fact, people in all walks of life, ladies as well. They are prepared to say, and do state in their evidence, that many of them had known him for a number of years and had

as you have indicated, would it not result necessarily from that weakening of the will power that a person might be led to do, at the suggestion of others, things that he would not do in his normal condition?

Mr. G. objects and the objection is maintained.

Q. Where the mind of a patient is weakened, in consequence of the disease which you have described, what is your experience as to the patient's power of resistance?

Witness: Power of resistance in regard to what?

Counsel: To the will of others?

A. That varies very greatly, dependent upon the form of mental disorder which one encounters.

Q. I mean the form which you have described?

A. In cases of melancholia of that character, while they are under the domination of their delusions more or less, they are very likely to follow out their dictates altogether regardless of anything that is brought to bear on them from an external source, especially if the influence has to do with trying to convince them that their delusions are delusions, because their delusions are really true beliefs to them as far as they go. My experience with cases of melancholia is that while acting under the domination of their delusions they are not easily led by outsiders. The delusions dominate them rather than the outsiders.

By Mr. G.:

Q. They are influenced by their delusions?

A. Yes.

talked with him on a great variety of subjects at various and irregular times throughout the whole interval—not for a week or two weeks at a time, but a day here, and perhaps three or four days later on. In that time they did not find that G. M. was in any way abnormal.

Q. If Mr. G. M. had been suffering from delusional melancholia (which I understand is continuous and progressive) in your opinion would it have been evident to the various persons with whom he came in contact during these months?

A. I think it certainly would have been apparent.

Q. Presuming that Mr. G. M. made a statement to his wife, about the end of February, that he thought the best thing that could happen would be for the three of them to die together (as appears from Mrs. M.'s evidence), would that indicate, in your opinion, that he was insane or suffering from confirmed melancholia at that time?

A. No. It would not; for the simple reason that, as a rule, any person suffering from melancholia—a melancholiac—the delusion would begin gradually, and would be repeated much more frequently. This was an isolated statement to the effect that it would be better for them all to die together. He did not make any attempt or do anything to show that it was a delusion in any sense of the word. It was simply a statement made in a moment of depression.

Q. Assuming that he made a statement to the effect that he had ruined his boy or ruined his family, and that he had ruined himself, dur-



By Mr. S.:

Q. That is, with respect to the subject of their delusions?

A. Surely.

By the Court:

Q. Is the mind of a melancholiac, so far as it governs his ordinary conduct, liable to work along normal lines?

A. Absolutely no. It is not. At no time is his mental condition not influenced and governed to a certain extent in all his intellectual processes—all the processes of thought, emotion, judgment, perception and so on—except by the delusions and the depressed character. That influences him at all times, and consequently you cannot say that a case of melancholia has a normal mental process going on at any time.

By Mr. S.:

Q. Did you hear the evidence given by Dr. T. and Dr. S.?

A. Yes.

Q. In your belief, from the time these gentlemen first examined G. M., considering the condition in which they found him, was there any time since then that he had been normal?

A. To the best of my knowledge and belief and experience with mental cases of that character and of that age, and knowing what I may know of their development and their progress, I should say from the time Dr. T. and Dr. S. found that man as emotionally depressed as they say he was—from that time until the present day he has not been normal mentally.

Cross-examined by Mr. G.:

Q. Do I construe your last answer correctly in saying that you

ing the months of January, February and March, in your opinion, would that indicate that he was insane and incapable of appreciating the nature of the transactions with M. referred to in this case?

A. No. I think not. If G. M. had believed he was ruined he would have shown it in his dress, and he would have shown it in his changed life, just as any other melancholiac would do.

Q. Supposing, for the sake of argument, that G. M. was suffering from a delusion that he was ruined, or that his family was ruined, during the months of January, February and March, what have you to say in regard to his failure to refer to this when speaking to the many people with whom he came in contact?

A. Assuming that he had these delusions, he would have been talking to every one about them. He would have been pounding it into everybody he came across.

Cross-examined by Mr. L., of counsel for plaintiff:

Q. Dr. C., for my own satisfaction and perhaps for the satisfaction of the court, will you kindly tell me what is a medical specialist?

Witness: A mental specialist?

Counsel: No, a medical specialist?

A. One who devotes his entire time to the treatment of a certain condition.

Q. That implies first that a man has made a special study of medicine?

A. Presumably, yes.

Q. And, of course, the narrower the limits of the specialty the better

consider the man ceased to be normal mentally when the delusions began or would you antedate it?

A. I would state that the disease was in the early stage of establishment at the time Dr. S. and Dr. T. found him in that abnormally depressed condition, with these delusions that he had lost everything, and wasted his substance and so on. I would consider the disease was established then.

In rebuttal:

Dr. W., examined by Mr. C. H. S.:

Q. You have already been examined on behalf of the plaintiff in this matter?

A. Yes.

Q. You have heard the testimony which has been given with regard to the possibility of recognizing or determining whether a patient is or is not afflicted with cerebral arteriosclerosis?

A. Yes.

Q. What is your opinion with regard to that?

A. I think it is possible for a doctor to determine with a reasonable degree of assurance whether a case is suffering from cerebral arteriosclerosis or not.

Q. Speaking with regard to the power of a patient suffering from delusional melancholia to conceal his condition, what have you to say to the court?

A. My experience is that patients suffering from melancholia and who have the disease established, may for limited periods conceal their delusions, and may, at certain times of the day—notably in the late afternoon or early evening—really appear brighter and seem to show that the melancholia has lifted

the specialist, other things being equal?

A. Provided it included the whole of that specialty; not half of it.

Q. So that a specialist who would have devoted all his time to the study of mental diseases would, other things being equal, be more competent than a specialist who has distributed his attentions to diseases of the nervous system and diseases of the mind?

A. You ask my opinion about that, and I say emphatically no.

Q. Give us the reason?

A. Well, if I am not correct in my appreciation of your question I would be glad to be put right. From a practical point of view the alienist sees these cases only after they are certified insane. The preceding stage of the condition is certainly more or less unknown to him, and for the very simple reason that these people—

Q. (Interrupting) Which people?

A. The people who are admitted to the asylums. They are there in an advanced stage of the condition. They are declared insane, but probably there is a long period of confirmed mental condition preceding that which the alienist does not see, unless he is also a neurologist and among these cases.

Q. So that a gentleman who like yourself, has devoted his time to the study of nervous diseases and what I would call the semi-ready stages of insanity—

A. (Interrupting) The preliminary stages of insanity—

Q. Is better fitted to pronounce an opinion than the specialist who is known as an alienist?

A. My opinion is that the man who is conversant with these con-

somewhat. I have seen many cases of that kind. I might refer to a case which came under my observation and treatment at the hospital not long ago, as a typical case to prove the point I refer to. We had a case at the institution, a man aged 55 years. He came to us in April and went away in May. During the last fortnight of his stay with us he appeared very well so far as his wife and family were concerned. When they came to see him he appeared to be very well and they objected very much to leaving him there. They took him out against our advice. We said that the man would be better with us and that he certainly was not a well man, but was a danger to himself. Notwithstanding this, they took him away. He did not show any depression to them and he did not talk over his delusions with them. When they came to see him he appeared to be sane. Indeed, he did not talk over his delusions very much with us, but, at the same time, we recognized that he was not very well. They took him out of the hospital on May 13, and about the middle of August he committed suicide. In other words, the disease was still there. It was continuous all the time. There was no remission and there was no intermission. The man was not well. He had the disease and he had these delusions which caused him to think that he should leave this world and that he should take his own life. As I say, he successfully concealed these delusions from his wife and family.

Q. Was he capable of talking rationally during that time?

ditions and who sees them every day would be able to give a better opinion than the man who only sees them when the pronounced stage is reached.

A. He talked very clearly and connectedly on many topics and in regard to many things.

Cross-examined by Mr. A. G.:

Q. Will you please listen to the question which I will read you from page 13 of your deposition given on behalf of the plaintiff in chief?

By the Court:

Q. Is the mind of a melancholic, so far as it governs his ordinary conduct, liable to work along normal lines?

"A. No. Absolutely. It is not. At no time is his mental condition not influenced and governed to a certain extent in all his intellectual processes—all the processes of thought, emotion, perception and so on, except by the delusions and depressed character. They influence him at all times; and consequently you cannot say that a case of melancholia has a normal mental process going on at any time." Is that answer correct?

A. Certainly it is correct. The process is not normal. I did not consider the case of the man I mentioned a moment ago as being normal. What I said was that he appeared so.

Q. But you did not confine yourself in that answer to saying that it was not normal. You went on to say that all the processes of thought, emotion, judgment, perception and so on, are influenced exclusively by the delusions and the depressed character?

A. I still maintain they are.

Q. You maintain that a man may absolutely create the impression he is cured, although every one of the processes of thought, emotion, judgment, perception and so on,

are influenced exclusively by these delusions?

A. Not influenced exclusively.

Q. You said in your answer, "At no time is his mental condition not influenced and governed to a certain extent in all his intellectual processes—all the processes of thought, emotion, judgment, perception and so on, except by the delusions and the depressed character?"

A. Yes; that is quite correct.

Q. They are influenced to a certain extent by the delusions. Do you maintain that he can be in that state and influenced at all times in all his intellectual processes by his delusions?

A. To a certain extent, yes. A man may be influenced by his delusions that he is a terrible criminal, for instance, and must get out of the world, or must rid the world of himself; yet, he may be able to conceal that delusion, so as to get an opportunity to kill himself.

Q. You are now suggesting that he may conceal his delusion so as to get an opportunity to carry out his plans?

A. It is merely one activity of the human mind.

Q. Do you suggest that he can carry that out to the extent of absolutely hiding his condition so that he will appear sane?

A. I do not suggest it. I absolutely know it. I have seen it.

Q. How do you know this man did not have a remission?

Witness: Which man?

Counsel: The man you mentioned a few moments ago as an example?

A. Because he was under my personal care and observation every day up to the time he left the hos-

pital. When he went out of the institution he was still suffering from melancholia, and he had these delusions, although, as I say, he did not show them to the very friends and relatives on whom he depended to take him away and who actually did take him away against our advice.

Q. Your idea is that this man was hiding his delusions for the purpose of being taken home?

A. At the time, he was.

Q. That would be the explanation of his behavior?

A. Yes.

Q. Nevertheless, he was not hiding his delusions from you?

A. No.

Q. He was perfectly confident that they were safely hidden if he hid them from his relatives and friends, and told them to you?

A. I could not say as to that.

Q. In any event, you did not think of suggesting to his relatives that they should question him in regard to these delusions?

A. I told his relatives, as I have said two or three times, that I considered the man dangerous. He mentioned these things to me, and I knew they were still in his mind, and that they ought not to take him away.

A. What sort of melancholic was he?

A. He was one of the involuntional types of melancholia.

Q. What do you mean by "one of the involuntional types?"

A. Depending on retrogressive and degenerative change physically. He was a man about 55 years of age.

Q. What was the cause of his melancholia?

A. I am not absolutely sure, without looking up the records. I think there was some statement made, but I am not sure what it was.

Q. What was his delusion?

A. He had the delusion that he ought to die. He thought he had lived a very sinful life, and it would be much better if he were out of the world. The man was a plasterer and had not been working for some time. He was not able to work, and he thought he was better out of the world.

Q. Do you suggest that these cases of men able to dissimulate completely to a certain class of people, while exhibiting their delusion to another class, are frequent cases, or do you deny the statement which I think I heard made that the general tendency of the melancholic is to harp on his delusions, unless there is some special reason which keeps him away from them?

A. I should say the average case of melancholia does dwell very continuously on the delusions. There is no doubt about that.

Q. What was the age of G. M.?

A. He was said to be 66 at the date of his admission.

Q. You say you can discover whether arteriosclerosis affects the brain or not?

A. I did not say that. I said that a doctor meeting certain symptoms in his patient might very reasonably come to a well-founded conclusion that cerebral arteriosclerosis did exist. That was the gist of my statement.

Q. Of course, you would not pronounce a man insane simply because you found evidence of arteriosclerosis, or even of cerebral arteriosclerosis?

A. No. I certainly would not.

Q. A mental examination would be necessary?

A. Decidedly.

Q. You may have a man suffering from arteriosclerosis and showing some of these symptoms which, according to you, indicate the probability of cerebral arteriosclerosis, and this man may be insane from other causes which have nothing to do with the arteriosclerosis?

A. Certainly.

Q. You have known of such men or have heard of such men having recovered.

A. I will not say that. I know I have had many cases of insanity recover, who have had arteriosclerosis in different parts of the body.

Q. In the present stage of science, the fact that they recover would be a conclusive demonstration that the insanity was not due to arteriosclerosis?

A. Yes.

Q. Take the case of a man who is insane, and who has arteriosclerosis and exhibits the symptoms which, according to you, indicate that he had not cerebral arteriosclerosis?

A. I would say not. If I found these symptoms pointing to arteriosclerosis, I would not expect a man to recover.

Q. That is not the idea I have in mind. I say take a case where the circumstances are such that, in the present state of science, your diagnosis would be that the man was suffering from cerebral arteriosclerosis. In other words, I ask you whether in the present state of science your diagnosis that he would not recover would be infallible?



A. No; nobody's diagnosis can be infallible.

Q. Was the patient to whom you referred as an example suffering from the same form of insanity as G. M. is suffering from?

A. I would call it an involuntional melancholia, but the sclerotic condition was not nearly as marked.

Q. That is to say, the sclerotic condition in M.'s case was more marked?

A. Yes.

Q. Was it the same class of melancholia?

A. Yes; I would class it the same. We diagnosed M. as a case of involuntional melancholia. I would also diagnose this other case as one of involuntional melancholia. Of course, any two cases of involuntional melancholia may show a diversity in certain symptoms.

It is hoped that a perusal of the above evidence will establish beyond doubt the foundation of which this paper is the superstructure, viz:—that there is great need for more agreement in the rendering of evidence by alienists and neurologists, and that such a diversity of findings from known facts as appear herein can only obstruct and not hasten the ends of justice.

NOTE: To Mr. Justice Cross, Mr. Henry J. Elliott, K. C., and Drs. G. Villeneuve, F. E. Devlin, and T. J. W. Burgess, of Montreal, I am indebted for valuable aid in the preparation of this paper. Dr. H. V. Robinson has compiled the expert evidence which was submitted in the case.

#### DISCUSSION.

DR. BANCROFT.—The placing of expert testimony in this country upon a satisfactory basis would seem almost as difficult a proposition as the passage of a workable sterilization law. As long as the legal profession regard the appointment of medical experts by the court unconstitutional, it is not easy to see how the present method of presenting medical expert testimony can be changed, however much the medical profession may desire it. The medical profession long for the time when expert witnesses can be sum-

moned by the presiding justice and their evidence presented in court in a fairly non-partisan manner. The legal profession declare that such summoning and presentation of expert evidence is a violation of our federal constitution and is not therefore practicable in the United States.

The authors of the paper properly lay great emphasis on the importance of consultation between experts on different sides. Men who usually think alike on medical questions ought not to be prevented from personal consultation, neither should they be forced into a partisan position when their whole training and experience predisposes them to a rational and unbiased mental attitude. Many a fair minded and honest expert has felt the importance of a consultation with his professional brethren on the other side, but is confronted with the opposition of counsel who do not wish the case to run in unpartisan lines. It has always seemed to me that medical counsel on either side ought, if they desire it, to have the opportunity of consultation; and that, provided counsel opposes such conference, the court might make such consultation not only permissive but mandatory.

I may add that in New England many of the leading alienists have in important criminal cases exerted such an influence in this direction that conference between medical counsel on opposite sides has been brought about with manifestly excellent results. If the truth is the main thing desired in a trial, then surely there ought to be no objection to consultation between medical experts to the end that purely prejudiced and partisan evidence may be eliminated.

DR. ARTHUR H. HARRINGTON.—I would like to mention a practice that exists in Rhode Island and which has existed for several years in criminal cases, in which the counsel for the defendant enters a plea of insanity; a law exists by which the judges of the Supreme or Superior Court may appoint a commission of not exceeding three medical men to consider the case in all its aspects and to return a report to the court as to the mental condition and responsibility of the accused. During the past five or six years this has been carried out in several cases and it has saved the state in several instances the expense of a long trial, and the medical men appointed by the courts have been of such character and standing that no one could question the wisdom of the report.

DR. B. D. EVANS.—The question of a committee appointed by a court to determine the sanity or insanity of a person charged with criminality by law embodies some very good features indeed. I, however, hope I will not be considered over-combative in taking issue with some of the statements made. I also hope that the medical profession will never get so weak that it is afraid; that its best men, its strong men will falter because of fear of criticism. I grant you that a commission appointed by a court, an impartial commission of three or four men, can with propriety render its opinion and that the public cannot consistently subject them to serious criticism. I was recently appointed by the Governor of New Jersey one of a commission of three to determine as to whether a man was insane or sane; he had already been convicted and was in state's prison. I was

firmly of the opinion that he was insane and was not, therefore, under the law guilty of the crime, which consisted of killing his wife and infant child; the other members of the commission took an opposite view; we got together several times and talked it over and I asked them to make a majority report and I would make a minority report. They insisted that we come to an agreement and asked me to withdraw my most positive statement; I did so and the man was electrocuted.

I only want to say that with a commission of that sort there will be disagreements, and it may be that some people who ought not to be electrocuted or hanged suffer the death penalty. I say this with all respect for the opinions of the profession.

A commission appointed by a court cannot, under our constitution, according to the best constitutional lawyers I have consulted, deprive the defendant of the right to expert testimony, wherever he may elect to secure it, but the commission does rob him of an advantage such as he would obtain if both the prosecution and the defendant select their own expert alienists. I realize that my opinion on this matter may be classed as a personal opinion, but from a constitutional standpoint, we cannot rob the defendant of the right to have his medical expert testimony. I do think a commission giving an opinion in advance of testimony of other experts would be unfortunate in a good many ways, and when human life is at stake it is a question whether we can safely accept this scheme of court action. Some good people view it as a sort of business proposition—I do not; I am not fond of expert testimony or expert work, but I do not entertain in full the views that some of my friends have expressed to the contrary.

DR. BRIGGS.—This matter came up in Massachusetts and was presented to the court last year, in regard to the appointment of a commission by a judge, which would be obligatory, but when it was referred to the attorney-general he rendered an opinion that it was unconstitutional; that we could not deprive any man accused of a crime and on trial for his life of the right to defend it in any way he saw fit. In cases that are not capital our judges do appoint commissions. It is almost a daily occurrence for these cases to receive notice to appear at court; they summon a man and examine him and if they find him insane he is sent to an insane hospital without trial.

DR. CARLOS F. MACDONALD.—There seems to be a great deal of misapprehension in the public mind, as well as in that of the general medical profession, respecting the subject of medical expert testimony, and especially in regard to the attitude and conduct of those members of the profession who are called upon from time to time to give such testimony, particularly in cases where mental conditions are in issue. It appears to have become the custom of late to denounce medical experts, not only in the public press, but in medical journals, and, I regret to say, by many members of our own profession as unscrupulous and dishonest, and as lending themselves to one side or the other for pecuniary considerations. It also seems to be fashionable

nowadays to criticise doctors who disagree, as if they were the only class of persons who differed in opinions, thus making no distinction between true and false experts, and condemning all alike. Now, the fact is, that in our profession there are experts and experts; many of whom are well qualified and conscientious, while certain others are apparently willing to lend themselves to the support of whichever side they are called, regardless of the facts in the case—in other words, who strive to make the facts fit the theory of that side as formulated by counsel. Certain of these experts are simply “hot house alienists” who “spring up in a night, so to speak, and who are woefully lacking in special qualifications and experience in mental diseases. On the other hand, I believe that the great majority of alienists who appear as experts in medico-legal cases are conscientious and honest as regards their work, and are unwilling to lend themselves to the aid of the side on which they may be called, unless the facts warrant them in so doing. The point seems to be overlooked that expert testimony is quite different from that of the testimony of lay witnesses who are called to testify only to facts, such witnesses not being permitted, under the rules of evidence, to express opinions except as to whether the acts and declarations of a defendant which they have observed, and to which they have testified, impressed them at the time as being rational or irrational; while the medical expert is allowed, under the rules of evidence, a much wider latitude, and may express his opinion, based on the evidence submitted to him, as to the mental condition of the defendant.

Unfortunately the usage of courts permits of the selection of experts by counsel on either side, without due regard to their qualifications or standing, the only requirement being that the expert so selected, is willing to give an opinion in favor of that side of the case; and, second, is the absence of any standard of qualification fixed by the medical profession as regards special study and experience in a given branch of medical science which would, at least theoretically, render the would-be witness sufficiently skilled in that branch of the subject to properly constitute him an expert therein. If the medical profession, instead of condemning medical experts, would fix a standard of qualifications based on special study and experience in a particular branch of medicine, which shall entitle a member to rank as an expert in that branch, and at the same time put its seal of disapproval and condemnation on the practice which now too frequently obtains of physicians posing as experts upon subjects respecting which they have no special knowledge or experience, it would, in my opinion, do much toward curing existing abuses in respect to the present methods of presenting medical expert testimony. Moreover, it should utterly condemn the practice of so-called “pan experts,” who do not hesitate to pose as expert witnesses on any and every branch of medical science.

It seems to me the time has come when the medical profession, instead of condemning medical expert testimony indiscriminately, should raise its voice in solemn protest against the tendency which has lately grown up to heap upon it ridicule and abuse because “doctors disagree,” and that, con-

sequently, all or substantially all doctors are dishonest. The fact is, doctors are no more prone to disagree than any other class of individuals where matters of opinion are involved. We know that lawyers are notorious for their disagreements, and that in substantially every case that is tried in court the contention of counsel on one side is diametrically opposed to that of the other side, and this, too, on substantially the same set of facts. Judges also are notorious for their disagreements, the higher courts frequently reversing the courts below clear up to the court of last resort, and if there were a still higher court, it would frequently be found over-ruling the Court of Appeals. Not seldom we find the body of judges constituting our Appellate Courts divided in decisions they render, the issue being decided frequently by a bare majority of one—and yet nobody would think of suggesting that these judges are dishonest simply because they happen to differ in opinion.

It frequently happens that experts on opposite sides are called upon to testify to a different set of facts; the hypothetical question on one side usually includes everything which counsel thinks would tend to strengthen his side, whereas the hypothetical question submitted by counsel on the other side usually includes only such facts in the evidence as he thinks will tend to strengthen his side—the rules of evidence permitting counsel to omit anything in the testimony which he sees fit, and only requiring that he shall not insert into his hypothetical question anything which is not in evidence. Thus, under the rule, counsel, in framing a hypothetical question may, and frequently does, omit the most material facts in the case. This practice tends to put medical experts in a false position in the eye of the public and apparently contradicting each other.

None of the schemes which have been put forward for improving existing methods of presenting expert testimony, such as the appointment of commissions by the courts, by governors, or by medical societies, are feasible. In fact our ablest judges have repeatedly declared that all these schemes are more or less visionary and impracticable, for the reason that under the rules of evidence a defendant may submit any testimony that will tend to help his defense, so that if experts appointed by courts report on investigation that a defendant is not insane, the latter still has the legal right to raise the plea of insanity on his trial and call experts to testify to the same. In the state of New York a law was passed in 1874 providing in substance that, where a defendant entered a plea of insanity, the court should appoint a commission to determine his mental condition, and that the findings of that commission should be final; and if the commission reported to the court that the defendant was sane, the issue of his mental condition should not be raised again on the trial. Under the provisions of that act, the courts, in a number of cases, appointed commissioners to inquire into the mental condition of the defendant, and in every instance where such commission found the defendant to be sane, the plea of insanity was raised again on the trial—as though no commission had existed.

Curiously, the question of mental disease is something which courts and lay persons seem to regard themselves as perfectly competent to determine, even in most obscure and difficult cases, and they freely express opinions on the subject; whereas they would not think of making a diagnosis in obscure and difficult forms of physical disease, but would be quite willing to leave the diagnosis to the physicians. I don't claim that existing methods of eliciting medical expert testimony are by any means perfect, but it is the best that can be devised under present conditions. As to defining the responsibility of persons accused of crime by adopting some scientific legal definition of insanity, while it still might not agree with medical opinion, it undoubtedly would do much to improve the present system of medical expert testimony. It is a fact that existing legal definitions of insanity, which are practically alike in all of the states of the union, are much behind the age—no advance having been made in this respect since the adoption of the legal definition of insanity by the English judges in the celebrated *McNaughten* case, in 1843, which declared that, in order to constitute a legal defence of insanity, the defendant must be so far disordered in his mind at the time of the commission of the act charged as not to know the nature and quality of the act he was committing and not to know that the act was wrong. Insanity is thus defined in almost exact terms in the criminal code of the state of New York to-day, and, as before remarked, it is substantially the same in all other states. The defect in this definition is patent to every experienced alienist. We know that many insane patients know perfectly well the difference between right and wrong, so that the question to be determined in such cases is not as to whether the individual knew that the act he was committing was wrong, but should be as to whether he was able to control himself sufficiently to resist the wrong he was doing.

I recall a case in which a distinguished physician in charge of a private institution was stabbed to death by a paranoiac who freely admitted that he knew it was wrong to kill a man, but declared he had to do it in this case in order to get his case before the court. He felt that he was persecuted by his relatives, by the police and by the physician whom he killed, but said he: "I knew if I killed this man I would be arraigned before the court, and, if so, I would be able to convince the latter that I was sane and rational, and that this persecution actually existed." He was subsequently committed to my care at the criminal asylum at Auburn, where he remained for many years.

In conclusion, in my opinion, a change such as I have indicated in the legal definition of insanity and at the same time fixing a standard of qualifications of medical experts by the medical profession, would greatly improve, and possibly cure, existing defects in the method of eliciting medical expert testimony.



# ORGANIZATION OF THE WORK OF THE HENRY PHIPPS PSYCHIATRIC CLINIC, JOHNS HOPKINS HOSPITAL, WITH SPECIAL REFERENCE TO THE FIRST YEAR'S WORK.

By ADOLF MEYER.

A little over a year ago we had the honor and privilege to welcome many among you at the opening of the Psychiatric Clinic founded by Mr. Henry Phipps. It is a great pleasure to welcome to-day the Medico-Psychological Association within these walls and to show you at least the beginnings of the organization of this clinic. We wish to demonstrate to you some activities in the department which always will be the *center* of this clinic, namely, the department of *clinical* service and its most essential laboratory annex, the laboratory devoted to the problems of the internal organs and metabolism and serum-reactions in our cases. I have not as yet been put into a position where I could organize either the neurological and neuropathological work, the aim of which will be to further research and more thorough study in the neurological conditions of our cases, or the psychological and psychopathological laboratory, which will standardize and push the behavior studies and psychobiological methods; two departments of fundamental importance for which we hope to get means of support in not too remote a future.

The year has been one during which the economics of such a hospital had to be tried out. It has also been a year during which a tentative program for the second, third, and fourth year classes of the Medical School had to be planned for the first time, although, owing to the fact that the time of the students was already fully occupied, but little provision for the absolutely necessary practical basis of the courses could as yet be furnished. Taking it all in all, we can hardly speak of this year as one of leisure or even of normal work; and, while it has been a year of the highest interest and full of absorbing problems, you will realize also what a small staff has carried the burden of this organization and how heterogeneous the demands have been. The following



physicians are upon the staff: Dr. C. Macfie Campbell, my associate, who has charge of the out-patient department; Dr. D. K. Henderson, who is resident physician, Dr. S. R. Miller, Dr. Truitt, Dr. Kempf, Dr. Hall, Dr. Flournoy, and Dr. Keyser.

The first patient was received on May 1, 1913. The private wards and one male and one female public ward were opened; and, as we obtained a sufficiently large nursing staff, the first floor wards, and finally the third floor wards, were added, so that by November our entire equipment was at the disposal of the public.

In keeping with the desire of the trustees and with the provisions of our city ordinance, the admissions have, as far as possible, favored cases who entered the hospital voluntarily, or at any rate, without actual personal objection. This established, in a way, the principles which hold for general hospitals, inasmuch as it was considered perfectly satisfactory from a legal standpoint to admit without formality all patients who did not raise objections against detention, just as one would admit a case of delirium tremens or a case of typhoid fever without necessarily demanding either the assent of the patient or a legal commitment. On the other hand, whenever a patient refused to co-operate, he was given the opportunity either to be examined by two physicians and to stay at the hospital under a legal form, or to be committed to another hospital, or the patient was allowed to leave the hospital in care of the family. Only 12 out of 370 patients were held under commitment and several of these because they happened to bring commitment papers. A certain number were committed to other institutions, not necessarily because of any unfavorable outlook, but often because it was considered best for the patient to be in a hospital located in the country with somewhat more latitude than that of our hospital. In all this, we have enjoyed the most cordial co-operation on the part of the neighboring hospitals.

The nature of the conditions of admission just mentioned and also the relatively limited provisions for excited cases naturally gave our experience a cast quite different from that of most of the other hospitals of a similar character. The clinic is not an admission hospital for any special district, a matter which will be taken up later only when we feel that we are in a position to do productive research leading to preventive and intensive study in some definite circumscribed locality. The admissions were selected

from the applications and from the patients who presented themselves in the out-patient department. Dr. Henderson has lately published in the Johns Hopkins Hospital Bulletin a brief account of some of the experiences with regard to the admission material, and especially of the principles on which we worked, namely, that we depend primarily *not* on the issue as to whether the patient is in a curable or incurable condition, but on the question whether he presents problems for solution, and whether or not in our plan of help, we find any adequate co-operation with the patient and with the family.

One of the great functions of the clinic is the diagnostic sizing up of the facts in a case, and the outlining of a safe program of care with which many ventures of expensive and useless experimentation may be replaced by a plan adapted to the finances and the best opportunities of the family and the patient. If we find that a patient can profit under the intensive therapeutic work of the clinic, we can keep the patient as long as we feel that adequate progress can be made; if we see that a treatment of a less strenuous and direct kind will furnish adequate results, it is our practice to direct the family and the patient to what seems to us the most practical and expeditious plan of care adapted to the prospects of the patient and to the means of the family. Therefore, patients presenting diagnostic or therapeutic problems, and lending themselves to intensive treatment, were given the preference throughout.

I may say in this connection, in the way of explanation, that the ward unit on each of the three floors consists of a ward with eight beds, with several single rooms, and on the first and second floors with provisions for continuous baths. The third floor is a ward for patients whose behavior is perfectly orderly, and for convalescents; on the second floor we try to maintain, as far as possible, a similar regime, keeping the ward as free as possible of actively disturbing elements; while the first floor division offers opportunities for more complete separation of incompatible patients, and is also so arranged that in case of admission of a case with infectious disease, the ward can be divided into two independently accessible divisions. On the fourth floor the private patients have rooms and suites, and on the first floor one room with adjoining continuous bath. The available means for study and for work with bed-treatment, bath and hydrotherapy, occupation, and mental readjust-

ment, are naturally such as to make undesirable the retention of many non-co-operative excitements and agitations, in which cases a transfer to a hospital with less compact wards often proved remarkably beneficial.

Over 100 of the 370 admissions were free patients, with an average treatment of 37 days each; 25 paid less than \$10.00 a week, with an average treatment of 72 days. The ordinary rate has been put at \$25.00 for ward care and \$30.00 for special rooms, and varying rates for the private patients. The extremes of the stay at the hospital have been one day and 334 days.

The extensive work of the out-patient department will be reported by Dr. Campbell.

From a psychiatric point of view the most interesting problem has been not only to push the diagnoses of the disease processes as far as possible, but also to get at means of defining more closely the individual prognosis and the nature of the case. I have long felt that we are in danger of considering too many possibilities settled by making a diagnosis merely along the lines of the present division of constitutional and non-constitutional, and dementing and non-dementing disorders. For this reason we have pushed as far as possible the study of the etiological factors, and those components of the conditions which are decisive for the outcome and for the treatment; and it is our main interest then to see whether these factors are modifiable or not, and to what extent we can find therapeutic indications and modifications aiming at the best possible adjustment, considering the assets of the patient.

A fairly large percentage of our cases consisted of organic disorders. Inasmuch as our neurological laboratory department is not organized as yet, the work was largely limited to clinical issues and to what the physician in charge of the laboratory of internal medicine undertook in the direction of serum work and salvarsan therapy. A slightly larger number of admissions belong to the opposite extreme, namely, the psychoneuroses. The intermediate group is formed by the standard psychoses of the usual psychiatric classifications.

The experience of this year certainly has given us a keen insight into the frequency of minor mental maladjustments which would not to-day become a problem for state institutions, but which are of tremendous importance for a healthy development of individ-

uals, families, and ultimately of communities. A study of personal assets, a study of the adjustment of the essential determining factors of adaptation and the induction of more normal resources for the conduct of life of our patients, and the development of standardized methods of discrimination in our work; these have been the guiding lines of our program.

It is natural that the general spirit in which the clinic is organized brings with it many interesting consequences with which the average hospital for mental cases has little to do.

In the first place, patients who are not committed, and many of those who are not even on the basis of the three-days notice stipulated in *voluntary* commitments, present problems much more like those of private practice. We are forced to do all in our power to develop means of helping the patients reach a correct understanding of the *meaning* of such a hospital and of any hospital for mental disorders and of helping them realize that it is important to get a careful study of the assets and the formulation of a plan of readjustment. Our division of the hospital deals with so many matters of a personal character that the mode of approach by the examiner and the way the facts are handled play a great rôle in the attitude of the patient.

We have no public ward rounds with semi-public discussions, and we give all desirable consideration to our patients in the clinical demonstrations; and in assigning students for collaboration in the work, we are favored with an unusually well-picked class of young men and women, so that I may well say that what worries about the collaboration of students may have existed, never came *post factum*, and rarely even "by anticipation" after the patient had learned to know the hospital.

The greatest difficulty is encountered in certain cases of agitated depression and in cases of overactive and overtalkative or impulsive states, where the routine of a hospital located in a city and the close association of patients become too narrowing and oppressive to the patient. In these conditions I have usually followed the principle of considering the feelings of the patient just as far as wisdom of action would permit, and that not infrequently with the result that a release of the patient to his home or a transfer to another hospital of his own preference had most beneficial results, and led to subsequent co-operation. To gain co-operation for the

period of *convalescence* is, after all, fully as important as prompt care at the beginning of the attacks; and if it is possible to tide over the frequently tantalizing intermediate period of maladaptation with as much *collaboration* as possible, we shall be able to overcome a great deal of the rigidity of the insanity-concept that lingers in the public mind.

The great lesson the public needs to take to heart here, as in so many other issues of practical life, is that no one is fit to be *absolutely* independent; we are social beings and members of a family and of a community, and act as a rule as agents of a common-sense consensus. Why should we not be able to harmonize with our dignity the conviction that there are times in every life when we had best accept the consensus of common-sense rather than our own temporary feelings? Let us try and make the public see that alienists and our laws want to lead to a realization of this and nothing more.

In all this I hope we have been able to steer clear of the deplorable tendency to create invidious contrasts with the existing hospitals and so-called asylums. I consider that one of the best contributions I can make to the solution of the problem of remedial and preventive psychiatry is to draw our state institutions from their isolation in the eyes of the public and the profession. We have common aims and common duties and we desire to work together on our difficult but, after all, most inspiring task. There may be differences in opportunities and equipment, and differences in the duties towards the community and state, but in principle our clinic shall never be used as a contrast to *your* institutions along the line of the traditional public notions concerning hospitals for the insane; on the contrary, I hope we shall be able to do our share to make patients and families grateful for the good help *you* offer them in times of need.

This will, of course, be easiest if we can establish close, though *informal*, but all the more *practical*, collaboration.

I consider it one of the greatest functions of the clinic to give opportunities of work not only to our students, but to men who want to devote six months or more to intensive psychiatric work. So far we have worked with vacancies on the staff, which we want to fill with men and women of promise; and I feel that the

plan used in New York, by which a physician is given a leave of absence for study and special work, on full salary or half-salary, together with an opportunity for some of the workers to live in the clinic, should make it possible to get that kind of give-and-take which forms the ideal of learning and teaching, and brings the state or private hospitals a valuable means of stimulating its physicians, fully worth the outlay of money.

Another line of collaboration will, I hope, develop with the exchange of laboratory facilities and laboratory material. That we should be very appreciative of opportunities to study patients or materials for which most hospitals are not equipped, goes without saying, and I hope to see the day when you will consider it worth while to cultivate the habit of exchange wherever it is practicable.

To-day's presentation cannot aim to give you in any sense a demonstration of the trend of the actual activities of the clinic. What we want to do is to give you a sketch of some of the phases and interests cultivated by various members of the staff. They all give, in one way or another, illustrations of our common-sense effort to formulate the facts and of our diagnostic and therapeutic work in the ways in which they are most likely to be intelligible at their true value, and effective. We have been favored with a sufficient variety of temperaments among the members of the staff to get good representatives of those aiming at formal diagnosis, those interested in the organogenic and neurogenic, and those interested in the psychobiological or psychodynamic factors; and we have, I hope, avoided undue partiality owing to the wonderfully manifold range of problems continually presenting themselves for practical solution and also owing to the calls of teaching.

The program has been abbreviated somewhat, so that we might get some time for questions and discussions between the papers.



# THE RÔLE OF THE PSYCHIATRIC DISPENSARY: A REVIEW OF THE FIRST YEAR'S WORK OF THE DISPENSARY OF THE PHIPPS PSYCHIATRIC CLINIC.

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The problems of the dispensary differ somewhat from those of the clinic and the aim of this review is to discuss some of these problems in the light of the first year's experience in the dispensary of the Phipps Psychiatric Clinic. It is obvious that in the dispensary it is not possible to carry out the same detailed studies which are possible when the patient is under continuous observation in the hospital; the examination is frequently somewhat summary and conclusions have to be drawn from data which are recognized to be inadequate for the thorough understanding of the case. The limitation of time tells especially in psychiatric work, for in this department we cannot always plunge abruptly into an examination; to establish satisfactory relations with the patient is essential for good results, but this requires time; the speed of the examination is largely dependent upon the condition of the patient; the physician is occasionally not permitted by the patient to take notes of important facts. The fact that the anamnesis, so important in psychiatric work, is often given by some friend with little knowledge of the case, helps to make the interpretation of many cases still more uncertain. It is not, therefore, from the dispensary that one expects a psychiatric discussion based on well-analysed clinical material. In the dispensary the practical demands of the patient stand in the foreground, and these demands usually require the investigation of a whole situation and not merely that of the patient as a unit; the attempt to modify this situation, which is essential for the satisfactory treatment of the case, takes one from the dispensary into the home and brings one face to face with the vital problems of the mental hygiene of the community.



If the inability to make a detailed study of the more complicated cases is at times to be regretted, there is compensation in the treatment of many interesting minor forms of maladjustment, which are included in the stream of dispensary material. The fact that so many of the cases present disorders to which it is hard to give a satisfactory name, and to group in any of the conventional diagnostic groups, is perhaps partly to be understood in the light of the changing conditions of psychiatric work. The descriptions of mental disorders found in classical text-books have been chiefly based on the clinical material found in the hospitals for the insane, while the less severe but more common forms of maladjustment have received scant attention, and are even somewhat grudgingly allowed to belong to this special branch of medicine. It is therefore not surprising that there is little agreement at present as to the formulation of the diagnosis in many such cases. In the work of the dispensary the aim has been rather to formulate the diagnosis of the cases in intelligible working terms rather than in terms of some rigid classification which does violence to the facts. It will be some time before we are in a position to diagnose our cases in uniform terms which will do justice to the dynamic factors in the individual case and at the same time indicate the relationship of the case to recognized forms of disorder.

During the past year (May 1, 1913, to April 30, 1914) 708 patients registered at the dispensary; in the accompanying chart the distribution of the patients in large provisional groups is shown.

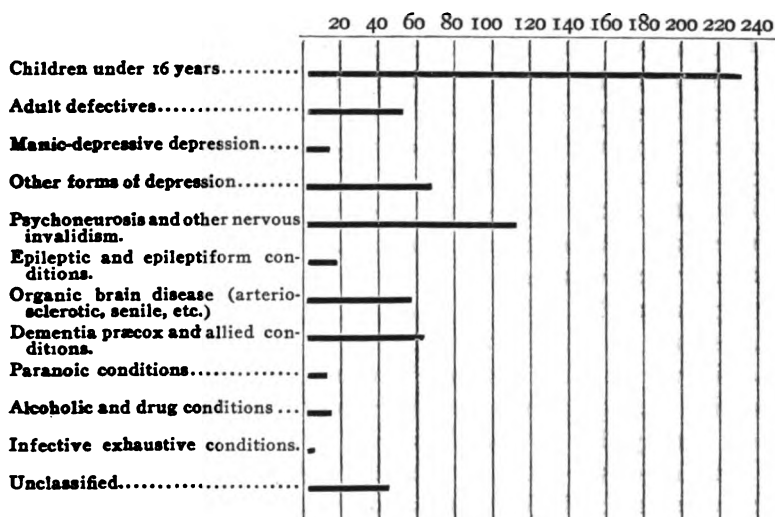
By far the largest group is that of children under 16 years of age; it contains 236 patients. No more important nor more fundamental problems are brought before the dispensary than those furnished by this group of cases, which even numerically is so striking; it raises important questions as to the relation of the functions of the dispensary to the work of other social agencies.

In close connection with the problems of these children may be discussed the group of adults in whom the crucial factors are mental defects similar to those which bring a large number of children of school age to the dispensary.

Next in numerical importance to the group of the children is a large group of cases including not only well-recognized types of

psychoneurosis, such as hysteria and obsessional states, but also a great variety of cases of nervous invalidism; in these cases of invalidism the mechanisms of the psychoneuroses are also to be traced, but the clinical picture is less distinct and is largely determined by special constitutional traits of the individual.

CHART I.—PHIPPS PSYCHIATRIC DISPENSARY. MAY 1, 1913, TO APRIL 30, 1914. CLASSIFICATION OF PATIENTS (708).



In another group is brought together a great variety of cases, where a reduction of mood or definite depression is in the center of the clinical picture; many of these cases might no doubt with equal propriety be brought into relation with the above group of cases of nervous invalidism. From this group of depressions it is possible to separate another group of 13 cases, which present in sufficiently clear form the manic-depressive type of depression (these, along with one case of excitement and two cases of the mixed type, form the total of 16 cases of manic-depressive insanity). To give this familiar name to these cases does not necessarily mean that we know more about them than we do about the other group of depressions; in fact, it is apt to paralyze our thought about them, as the familiar diagnostic term brings with it an assumption of knowledge which is rather illusory. To

think therefore of these manic-depressive depressions in the general framework of the whole group of depressions will help to keep alive the problems of the manic-depressive disorders; instead of trying to grasp the meaning of the other cases in relation to the superficially familiar group, we shall be encouraged to work seriously at the individual cases of the larger group and to utilize the principles discovered there to throw light on the familiar but little-understood manic-depressive depression.

The larger group of depressions consists of 68 cases of rather heterogeneous nature. One must here repeat that these cases have been studied under dispensary conditions and that this presentation merely gives a provisional grouping of these cases; this whole group furnishes an exceedingly fruitful field for intensive work and there is no doubt that in a large number of these cases a fairly satisfactory reconstruction of the whole process could be arrived at. Without such an analysis we are working with rather crude measures.

A provisional division of this group was made into two subordinate groups; the former of these was characterized by the prominence of somatic complaints, such as headache, dizziness, crawling feeling, vague pains and paræsthesias, "nervous indigestion," constipation and sleeplessness.

In the other sub-group were included all cases of depression not otherwise classified. With regard to these two subordinate groups of depression, it is probably of significance to note that in the former group, with the marked prominence of somatic symptoms, only 12 out of the 37 patients were under 40 years of age, while in the second group 19 out of 31 were under 40. With regard to the sex-incidence, in the former group 28 out of 37 patients were women; in the latter group 19 out of 31 were women.

The symptom-picture, if one is entitled to use this term for symptoms so poorly knit together, in the first group is thus seen to be more frequently found in women and at a somewhat more advanced age than the symptom-pictures of the second group. To many of these cases it is evident that the term "involution-melancholia" may be applied without doing too much violence to our conscience; but the comfort supplied by this familiar term does not bring with it much illumination and again is apt to dull the interest in research. As a matter of fact, none of the patients

presented the classical picture of involution-melancholia, and it would have required a certain classificatory enthusiasm to have grouped many of the cases under this head. When one turns from these more formal points to the consideration of the individual cases, we find it possible, even under dispensary conditions, to get considerable insight into the development of the symptoms and into the rôle which the symptoms play in the adjustment of the individual to the actual problems of life. Here the study of the personality and of the actual situation is essential; it is usually necessary to go beneath the compromise of the individual life to study the actual dynamic factors. It was striking to see in how many cases the symptoms seemed to arise in the setting of a difficult marital situation.

The line of treatment follows the above general indications, and the difficulties in the way of a satisfactory result are obvious. The personality of the patient is not easy to modify at this period; faulty adjustments have become habitual; compromises and evasions have become an integral part of the individual's life; the symptoms have to a certain extent proved to be along the line of least resistance; the marital situation has frequently to be accepted, even although we find that the marriage was originally entered into without affection in order to forget a first love. Frequently, however, a certain modification is possible; the break in compensation may have been due to factors which can be modified; the physical health of the patient can perhaps be improved, faulty hygiene corrected, sane recreation and wider interests introduced into a rather dreary and narrow life, and the patient brought to face in a more direct manner the underlying factors. By means of the social service department it is often possible to improve the situation at home, and some tactful advice to the husband or wife or family of the patient may bring good results; an occasional visit to the park or even to moving pictures is a prescription not beneath the dignity of the physician and may be based upon more rational grounds than a routine tonic or hypnotic.

In the more heterogeneous second subordinate group of depressions the same principles apply as in the group already discussed. Here, too, the more opportunity one has of studying the individual psychology of the case the further does one get from the standpoint of formal classification and the more anxious one

is to formulate the disorder in dynamic terms. To illustrate what has been said, the following case may be briefly reported :

J. S., a man 68 years of age, had not been very successful financially for some time. He came to the dispensary because he did not rest well; he had swimming of the head, shortness of breath and some nausea. He himself referred the onset of the symptoms to financial troubles which began in 1911. He felt sad, but there was no retardation. He was restless during the examination. His memory was very good. Physically, there was little to notice; he showed very slight arteriosclerosis.

The case appeared to be a fairly simple type of depression, partly explained by his financial worry, and more or less intelligible as an excessive reaction to this worry in a person of advanced age.

In this case the opportunity for a fuller review of the patient's life brought up very important factors, which would have to be taken into consideration before one had a right to formulate the exact nature and mechanism of the disorder.

It was found that the patient had had earlier in life several attacks of depression. These attacks of depression, however, were not merely to be looked upon as the expression of some obscure constitutional disorder. They were found to be directly related to the problems of his sexual life. The patient had worried considerably about masturbation. His physical health was running down, and at the age of 20 he went to a quack physician, who diagnosed some disease of the bladder and of the nervous system, whereupon the patient went to bed for two months. He had several similar weak spells during the following years. He married at the age of 26, and from that period until the age of 66 (in 1911) he was absolutely free from depression.

The case illustrates the limitations of dispensary work and the wisdom of making the diagnosis in rather simple and common-sense terms. If the examination had been confined to the first two interviews the case might have been considered a reactive depression, to be explained partly by the organic changes so frequent at this period of life. The later discovery of the earlier attacks might have seemed to justify the designation of manic-depressive depression. The understanding of this case could only be attained by the analysis of the individual attacks, and in the light of the mechanism of the earlier attacks the onset of the depression at

66 became a problem of much greater interest than one of classification.

The largest group of adult patients, as already mentioned, consisted of those who either presented a well-recognized psychoneurosis or less well-defined forms of nervous invalidism; the group is obviously very far from homogeneous. Several cases could perhaps with equal propriety have been included in the group of the depressions, especially those showing a prominent hypochondriacal trend, and several cases grouped under the depressions might no doubt on a fuller examination have been found to belong to the psychoneurotic group. The problems of the psychoneuroses are sufficiently difficult even under the most favorable conditions of study and treatment; the diversity of opinion with regard to their fundamental mechanisms is extreme and the nomenclature is in a rather fluid state.

The cases observed during the year fell into six provisional groups as seen in the following table:

<b>PSYCHONEUROSES (INCLUDING ILL-DEFINED TYPES OF NERVOUS INVALIDISM) .....</b>		<b>110</b>
Anxiety-neurosis .....	21	
Hysteria with attacks or purely physical symptoms.....	23	
Hysteria with morbid fears.....	19	
Obsessive thoughts and actions.....	14	
Hypochondriacal and neurasthenic states.....	13	
Nervous invalidism of less well-defined type (frequently inadequate data) .....	20	

It would be out of place here to take up the more fundamental problems of the psychoneuroses; it may be useful to discuss how far the conditions of dispensary work introduce special complications. These cases will always be an important factor in dispensary work, because, owing to the less severe nature of their symptoms, the patients frequently are disinclined to come into a hospital, and because their treatment is as a rule too prolonged for continuous hospital residence.

Whatever may be one's views as to the nature of the psychoneuroses, most will agree on the necessity of a rather thorough review of the life of the patient in all its bearings. The special constitutional traits of the patient, the details of the individual life, have to be understood and the patient has to learn to bring

to discussion much that has hitherto been strenuously repressed. There is no short-cut towards the necessary self-knowledge and any attempt to force the pace or to change the tedious step-by-step progress is apt to retard rather than accelerate the recovery of the patient. Re-education can never be made an abrupt process and the attempt to do so is futile. As the physician cannot delegate the work to any other person, but has to continue the detailed study and treatment of the case personally, great demands are made on his time. The possibility of treating the dispensary patients along these lines has been due to the comparatively large number of physicians who are associated in the work of the dispensary. It not infrequently happens, however, that for various reasons rather strict limitations of time are put on the treatment of the patient; the patient may perhaps be spending a short period in Baltimore, or the demands of the other patients may not allow the physician to give the desired time to the special patient. There is a tendency in some quarters to dogmatize about the minimum time necessary for satisfactory treatment of these patients and the impression might be gained that, if these time conditions were not fulfilled, the treatment of the patient would be rather futile. There is of course much truth in this caution against expecting quick results. On the other hand, the physician must not demand too much. It is quite striking what excellent results may be gained from a rather limited series of interviews. The record of the case will of course not be a very convincing clinical document, and many interpretations may be borrowed from the physician's experience with other cases; the therapeutic result, however, may be very satisfactory and the patient may return to the home relieved of symptoms, and having acquired a degree of self-knowledge which is the best guarantee of satisfactory mental hygiene in the future. Useful statistical data as to the comparative results of the different forms of treatment of the psychoneuroses are not available; results rapidly attained may be only transitory, but the impression from the dispensary work has been that dispensary conditions are not unfavorable for the treatment of this class of patients, and that even under great restrictions of time the physician, in the study and treatment of these disorders, should feel encouraged to make use of the same principles, the validity of which has been demonstrated on other material where

a more exhaustive analysis of the case is possible. It may not be out of place here to refer to a practical point of considerable importance; where detailed study of the case over a prolonged period is necessary, the physician must be on his guard against the patient's making use of the interviews for his or her own purpose, and making little real progress towards a satisfactory readjustment. The patient may derive from the interview a gratification, which simply becomes an additional factor in her complex neurosis. It must be emphasized that this situation is not to be immediately attributed to the trend of the examination, for one finds frequently that the patient has already indulged in the same attitude towards other physicians, who have treated her for a prolonged period for her neurotic symptoms along somatic lines. It is possible, no doubt, in many cases, for the physician to deal directly with this situation where it arises; but that depends to a certain extent on the whole make-up of the patient. Here the social service department has been of invaluable assistance. Instead of laying too much weight on the detailed analysis of such a case, it is essential to emphasize the positive side of the reconstruction of the patient's life and to do everything possible to raise the general level of the patient's interests and activities by a thorough investigation of the home situation and practical guidance with regard to definite activities. The social-service worker can here co-operate with the physician in a way which obviates certain very practical difficulties in the relation of the patient to the physician.

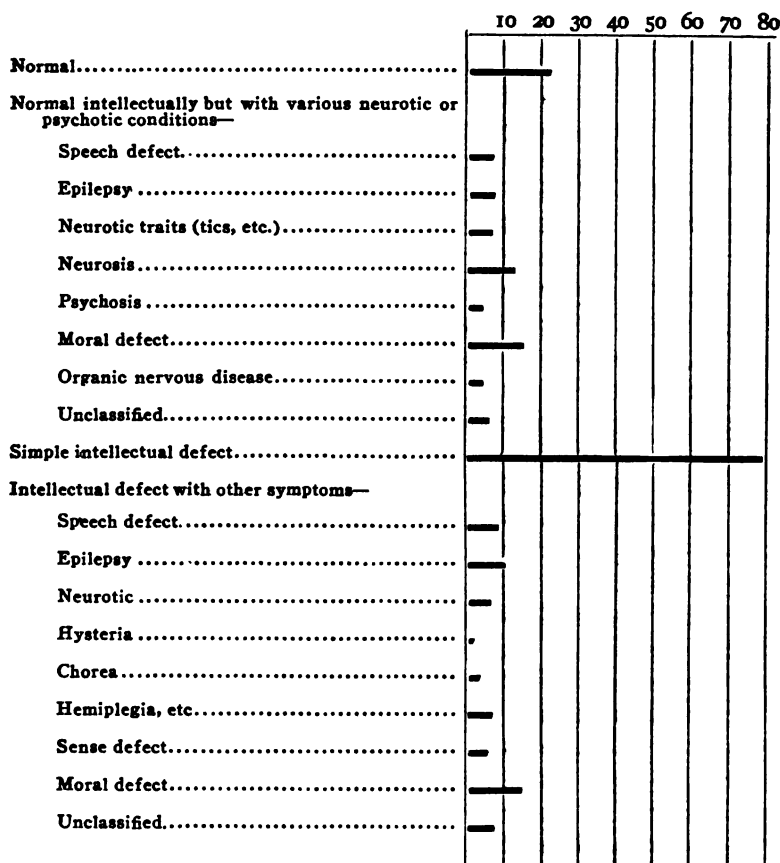
Of the total work done in the dispensary, that in relation to children is socially perhaps the most important at present, and promises to develop extensively in the future. The children who came to the dispensary formed exactly one-third of the total number of cases. The conditions for which the children were brought to the dispensary varied very widely, some cases being brought for small habits like thumb-sucking, or for peculiar tics, while others presented conditions of profound defect. These cases have been grouped as is shown in chart 2.

Twenty-five children were found to be practically normal. Some of these were examined because they were members of families where many cases of defect had been found; others were brought by teachers on account of difficulties at school; others



were brought for a thorough examination before the child was placed in some home. The children who presented distinct anomalies (211 in number) have been grouped according as they did or did not show a definite intelligence defect, this usually being standardized by means of the Binet-Simon scale. One hundred

CHART 2.—PHIPPS PSYCHIATRIC DISPENSARY. MAY 1, 1913, TO APRIL 30, 1914. CHILDREN UNDER 16 YEARS (236).



and forty-eight children showed a definite intelligence defect, and Dr. Hall has reviewed the cases in this group, and discussed the important problems that they present both from the medical and social point of view.

The children who did not show a definite intelligence defect presented a great variety of clinical problems.

The importance of the early period of development in relation to the origin of nervous and mental disorders in the adult period has steadily gained recognition as the study of the adult psychoses has become more thorough. In studying the individual adult psychosis there may always be some uncertainty as to how far the memories of the actual experiences of childhood have been distorted in the adult mind. In the group of children at present under consideration one has the opportunity of studying these factors more directly, and one can trace at an early stage the development of faulty habits fostered by the bad hygiene of the environment. Traits, which later on may be considered as inborn and constitutional, are seen in their relation to the actual situation which develops them. The study of these children promises to give us very important information with regard to the development of the child and the evolution of neurotic traits and other anomalies of adjustment.

Several children presented already a well-marked psychoneurosis.

At this early stage the mechanism of the psychoneurosis may be traced much more easily than when it has passed through the later adult elaborations.

J. F., a boy of 7, was referred to the dispensary from the Harriet Lane Home. He had been brought to the hospital, as he had shown peculiar nervous symptoms. In January, 1914, he had suffered from chicken-pox. Four days after recovery he cried out that his feet were growing larger; that his hands, and nose and mouth were growing larger. He began to dream of snakes. On account of this he was afraid to go alone into a room. One day his mother hurried to him, as she heard him crying. He was shaking and crying out that he had seen a black snake coming after him. He was now sensitive and did not want people to look at him. He dreamed frequently of robbers, and in the day-time he was afraid of robbers.

In the second interview at the dispensary the following facts were elicited, the boy talking very frankly, even in the presence of his mother and several physicians:

In his dreams he saw robbers, and robbers would kill his younger brother Bob and cut him up in pieces. He also had dreams that his brother was drowned. The mother said that when the younger brother was

born the patient would object to her nursing him, and would try to push the baby away with his feet. The mother stated that the patient was very fond of his brother Bob. The patient, however, made the interesting statement, "Bob is the pet and sits on mother's lap, and if anything wrong happens, I do it." He also said: "Bob is the pet, because he always sleeps next to mother."

In the dispensary the patient made the statement that he had been growing small, just as small as Bob (the brother). Evidently some of the boy's morbid fears were closely related to the repressed jealousy of his brother.

The date of onset of the symptoms was important. It came on after the attack of chicken-pox. Before the chicken-pox he and his brother had shared the mother's bed, Bob sleeping next to the mother. When the patient had chicken-pox he was left alone in the bed, while the mother and Bob slept on a couch. The patient now cannot bear to hear chicken-pox mentioned.

This meager analysis of the case was sufficient to indicate that the boy was to a certain extent suffering from his jealousy and its repression, and the mother was advised to take quite seriously the utterances of the patient, and get him to feel that he could talk to her absolutely frankly about all that was in his mind. It was hoped that the development of the frankest possible atmosphere in the home would prevent the further development of neurotic symptoms.

In another case the clinical picture was a little more ominous, and the family atmosphere very difficult to modify.

The patient, a girl of 8, had developed slowly in infancy, but showed no mental defect. For many months she had suffered from a choreiform condition of rather peculiar nature. She had a strident and unnatural laugh; she asked questions incessantly, and the questions were frequently rather aimless and with self-evident answers, *e. g.*, "Is mother sitting there?" (Looking at her mother.) "Are you my doctor?" "Am I your patient?"

The child showed an abnormal interest in water. On one occasion she had been rescued in the middle of an attempt to go down the sewer. Two months later she pointed to water flowing down the sewer and said: "Water can go down there, but little girls cannot." The flushing of the toilet fascinated her, and her mother had difficulty in keeping her away from the faucets.

This obsessive curiosity of the child was interesting in relation to the strongly repressive atmosphere in which she was brought up, which tabooed many topics of childish interest. The father was strictly religious, unable to ride on the trolley on Sunday, looking upon dancing as destructive of the soul. The mother was rigidly conventional, and felt that she should

punish her two-year-old boy for making reference to his sister being in the toilet. When the patient at home would roll on the floor in a careless way, the mother was horrified at her scandalous behavior.

In this case it was felt that every effort must be made to give a little more freedom to the development of the natural instincts of the child, and the social-service worker has spent much time in trying to interest the mother in studying and trying to understand the child. She is trying to get the mother to give the child freer opportunity for development. The child has made weekly visits to the dispensary, where she plays contentedly with the toys provided for her, and has some respite from the continual nagging of her mother. It may be possible to arrange for the child to have a short holiday away from her parents, although in their anxious care for her they are rather averse to this.

Actual studies of cases of this description will be an important contribution to our knowledge of psychopathology. Such work will have to be done as a rule in the dispensary, for the child will have to be observed for a very long period. Parents are frequently unwilling to be separated from their child, and treatment consists in the modification of the home, as well as in giving direct assistance to the child.

The development of minor neurotic symptoms in relation to faulty environment was well seen in a little girl of 6, who was brought to the dispensary, as she was subject to night terrors. She would wake up screaming "Mamma" (grandmother), and frequently had to be taken into her grandmother's bed. The parents of the patient were dead. With regard to her other symptoms, the patient was said to have comparatively little appetite, and to be somewhat capricious with regard to food. She was also timid if left alone, and would always have to reassure herself as to the whereabouts of her grandmother. As a matter of fact, the grandmother had been abnormally timid as to the child being allowed to go out; she was always afraid that something would happen to the patient. She gave the patient numerous pennies, allowed her to buy candy constantly and to eat indiscriminately between meals. The grandfather thought it was a shame to try and force any food on the patient at meals, and the patient therefore got whatever she wanted; she was always able to get what she wanted by harping on it, or by crying until the end was ob-

tained. The patient had been given some sleeping medicine by another physician, and the grandmother rather favored the continuance of this. Here the whole education of the patient was seriously at fault. The main problem was to organize the hygiene of the home, and, if possible, to instruct the grandmother, while the child herself required no special treatment.

An extremely important group of cases consists of children who have shown evidence of what may roughly be called moral defect; the patients have either been pilfering, or shown intolerable behavior of one type or another, or have shown sexual immorality of a more serious nature than mere incidental masturbation.

In these cases it is very difficult to determine how far these undesirable traits can be related to more elementary disorders, and how far these underlying factors may be open to modification. In many cases one finds the association of these undesirable traits, such as stealing, with other evidences of neurotic instability—bad dreams, bed-wetting, masturbation. From the point of view of the criminologist, the material referred to here is extremely important.

The work of the social-service department has been already referred to in connection with other groups, but in no group does the work of this department play such an important rôle, and it is in regard to this group that the responsibility of the dispensary for seeing that advice given is actually carried out, is very direct. Unless the community has already available some efficient organization which is able to deal with the situation in these cases, this duty seems to devolve upon the dispensary, and this work can only be done through a well-organized social-service department. The extent of the problem is considerable, and to have a department which will adequately cope with the situation probably means a very large extension of the work. The results of the work may not appear to be very striking; they are not quickly attained, but they are of far-reaching significance, and permeate deeply the whole social structure. To give an example of the work that is done:

A boy of 11 was being treated at the dispensary for stammering. His home conditions did much to foster the general nervousness, of which his stammering was one expression. The boy was allowed to go to bed at all hours, usually rushed to school with practically no breakfast, had a rather injudicious diet, and drank coffee *ad lib*. His sisters delighted to

irritate him and to provoke outbursts of temper. His mother babyfied him and made him the sport of the other boys. These were facts that were obtained after careful investigation by the social-service worker, and they yielded immediate indications for treatment. The boy now has a regular daily regime; he is in bed at 8.30 p. m.; has a cold tub at 7.30 in the morning, then punches the bag; has breakfast in a sensible manner, with no coffee, and goes to school in time. The sisters have been looked after to a certain extent, and the mother has been encouraged to allow the boy to develop more independently along with the boys of his own age. The boy is fond of manual labor; he has been given a garden in the back of the premises, and at the dispensary he enjoys basket-making. His general speech level has improved, although he still stammers. With regard to his sexual habits the boy is somewhat evasive, but it is hoped that a healthy regime may do much to reduce any difficulties in this sphere.

Now that the boy has been adopted as one of the "gang" which previously used to torment him, his mother, who previously reproached him for his timidity, is alarmed at his newly acquired "toughness," but notices that when he is with his tough comrades there is no trace of stammering.

F. B., a boy of 9, was brought to the dispensary because of screaming spells. He had been a child of slow development, and had a definite speech defect. Whenever he was crossed he got into a violent temper, threw himself upon the ground and screamed until he was black in the face. The parents were dead; his sisters were unable to control him. The boy was nervous and restless at night; he was slovenly in his appearance; he was a truant at school. The home environment was very poor, as the patient and his three sisters slept in one dark bedroom. The social-service worker found that it was possible to put the boy in a new environment; he was placed in the Home for Worthy Boys, where he is looked upon as a very promising child. He is now bright and tidy in appearance; is a regular attendant at school which he enjoys, and shows a very marked improvement in his speech. He comes regularly to report at the dispensary, where he gets speech training.

The mere fact that the abnormalities of a child are taken seriously by the physician, and that the whole subject is investigated thoroughly, has probably a very considerable influence for the better on the home environment of the child. The attitude of the parents becomes fundamentally different.

This was very noticeable in the case of A. A., a boy of 8½, who had been stealing. The father and brother looked upon a thief as a disgrace to the family, and therefore to be relegated to some state institution. To give the boy every chance they brought him to the dispensary to see whether an operation could be done. The boy was naturally reticent at the first interview. The father

did not bring the boy back again, as he did not see that anything was to be gained by simply talking to the boy. The social-service worker investigated the environment, found that the boy was being brought up in the back of a saloon in a colored neighborhood. He was extremely timid, slept badly, was thrown into a panic by a thunder storm. It has been possible to get the boy to come back occasionally to the dispensary, where he makes baskets; he is now on frank terms with the physician. The improvement in the attitude of the father is shown by the fact that on the last episode of pilfering he at once called up the social-service worker on the telephone and asked what was to be done in the situation.

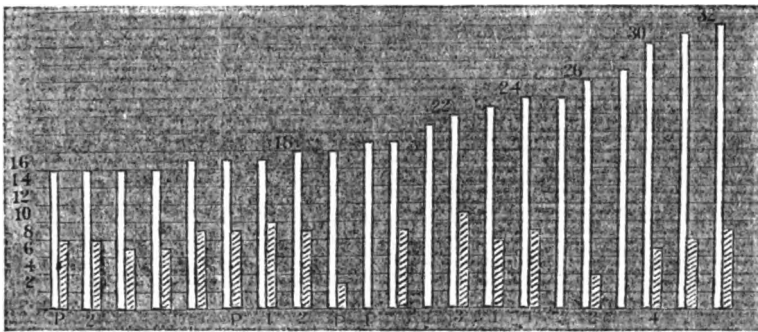
This little episode has really a very profound significance. The work of trying to carry out the treatment, which is essential in such cases, takes up a great deal of time; the individual worker can deal with only a limited number of cases. We feel, however, that the community is responsible for these children, and that this responsibility can only be adequately lived up to when this type of efficient supervision is available for every child who needs it.

Closely allied in its problems to the group of the abnormal children is the group of adults who presented a marked constitutional defect. This group contained 58 patients; 9 of these showed no marked defect of intelligence, but a marked psychopathic personality which made their adjustment to the environment extremely imperfect; 22 patients showed a marked defect of intelligence with no special complication; 27 patients showed a marked intelligence defect complicated by sexual immorality. Of the 42 women in this group of defective adults, 21 were sexually immoral; the accompanying chart (chart 3) shows the age and mental level of each of these women and the number of their illegitimate children.

The chart indicates facts of very great social importance; it illustrates the future life history of many of the defective children under 16, unless society faces the responsibility of caring for these children. For one with a statistical mind the expense of rearing these children of defectives compared with that of preventing their occurrence would repay study. Another fact that comes out in this chart is the startling cessation of this material above the

age of 32. How is it that above that age the conditions are absent that bring these patients to the dispensary? Have these women succumbed to the terrible risks to which they are exposed? Or have they been disposed of in institutions? Or do they not appear because they no longer become pregnant, nor develop other conditions which bring them to the attention of special organizations?

CHART 3.—PHIPPS PSYCHIATRIC DISPENSARY. MAY 1, 1913, TO APRIL 30, 1914. AGE AND MENTAL LEVEL OF THE 21 DEFECTIVE WOMEN SEXUALLY IMMORAL.



White: Physical age. Shaded: Mental age (B. S. scale). 22 Illegitimate children. P: Pregnant. The numbers beneath the individual cases represent illegitimate children.

With regard to the cases of organic brain disorder in our dispensary material there are few special points to mention. These cases were distributed as follows:

**ORGANIC BRAIN DISEASE (58 cases).**

*Syphilitic Brain Disease (29 cases).*

General paralysis .....	15
Cerebral lues .....	6
General paralysis or cerebral lues.....	4
Cerebro-spinal lues .....	3
Tabes dorsalis .....	1

*Non-syphilitic Brain Disease (29 cases).*

Cerebral arteriosclerosis .....	14
Senile dementia .....	5
Brain tumor .....	2
Brain abscess .....	1
Double athetosis .....	1
Unclassified .....	6



It is worth noting that in the organic conditions, excluding the epileptic and epileptiform conditions, 50 per cent of the patients showed an organic brain disease which was the result of syphilitic infection. It may also be mentioned that the 15 cases of general paralysis in this group already showed a well-marked picture of the disease; they came to the dispensary at a comparatively late period, and not when treatment would have the best chance of yielding results. It will be a great step forward when these patients are brought to the dispensary at the first onset of their symptoms, and it is hoped that as knowledge of these conditions becomes more general these cases will be seen at a very much earlier stage.

Several of the cases of organic brain disease presented interesting neurological symptoms, such as aphasia, and were admitted to the Clinic for the purpose of more accurate study. Several cases were admitted for special treatment.

With regard to the group of schizophrenic states or dementia præcox and allied disorders, it was a rather striking fact that the patients usually presented symptoms for a very long period before they finally came to the dispensary, so that the possibility of modification of the condition by a systematic attempt at the reorganization of the life of the individual was seldom a matter of much promise. Here, too, the general increase of psychiatric knowledge among general practitioners, and the wider recognition among the laity of the functions of the Psychiatric Clinic, will no doubt result in these patients being brought to the dispensary at a very much earlier stage, when the disorder is perhaps more open to modification.

During the year, 78 of the 708 dispensary patients were admitted to the Clinic for the purpose of more detailed study and special treatment.

In reviewing the work of the dispensary during the past year one is impressed with the valuable nature of the material which is there offered for study. It is in the dispensary that one will find perhaps the best material for the study of many nervous and mental disorders in children, and of the incipient stage of many of the disorders of the adult. In connection with the dispensary one will be able to reach some conclusion as to the course which

such disorders run if at an early stage they are taken seriously and an earnest endeavor made to modify those factors which seem largely responsible for the disordered adjustment. After some years one will have material which may be useful in demonstrating that many disorders, which we are accustomed to look upon in a rather fatalistic spirit, can be very much modified by serious treatment, not only of the individual patient, but of the environment in which he is living. The dispensary material emphasizes very strongly how much is gained by considering the individual in relation to his environment, not merely as a unit by himself.

The problem of treatment of the individual case involves a study of the type of personality; of the amount of pliability of the individual; an estimate of the possibility of modifying adjustments of long duration; it involves the study of all those somatic conditions which have much to do with nervous and mental abnormality; it involves the study of the whole situation of the individual's life. The scientific problem is solved when we understand the mechanism of the symptoms in the light of the reaction of the individual to the actual tests put by the environment. The problem of treatment will only adequately be met when we lay due weight on the modification of all the factors which are open to modification, when we are not content with giving advice to the patient based on a detailed analysis of his case, but feel responsible for dealing with the complex situation of which the sickness of the patient is only one aspect. For the satisfactory fulfilment of our responsibilities, however, it is necessary to realize that a somewhat extensive organization will require to be slowly evolved; an organization which should work in close co-operation with other agencies, especially the Committee of Mental Hygiene. An optimist can look forward to the time when it will be possible not merely to say what might be done for a patient, but to see that the actual steps are taken which will give the patient the best chance of returning to an efficient level.



## KORSAKOW'S PSYCHOSIS OCCURRING DURING PREGNANCY.

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During gestation or the puerperium various forms of paralysis may occur, which may be either of (1) central or (2) peripheral origin. For instance, many cases of hemiplegia have been described which have developed during childbirth either as a result of a hæmorrhage, embolus, or thrombus, and it is by no means rare to meet with cases of paralysis of the peripheral nerves either of traumatic (*e. g.*, from pressure on the nerves as they pass through the pelvis), or of toxic origin. It is this last form—the so-called toxic form—to which I want to direct attention. The earliest reference to this subject which I have been able to find is an article written in 1854 by Fleetwood Churchill "On Paralysis Occurring During Gestation and in Childbirth." In this article Scanzoni of Wurzburg is quoted as having said that paralysis of the lower extremities may in some cases be due to pressure, but in other cases, as the paralysis did not appear until some time after labor, and as a similar affection is known to have attacked the upper extremities, pressure could not be the sole cause, *and it may be attributed to some more profound derangement.* Furthermore, Churchill described as occurring with pregnancy a series of 35 cases of various forms of paralysis, 22 of which occurred during pregnancy, and 13 either during or a short time following delivery. Unfortunately the case records are exceedingly brief, and the cases in the light of our present-day knowledge are so indefinite and heterogeneous that it becomes difficult to estimate even approximately how many of these cases were really cases of peripheral neuritis due to an unknown toxin, how many were of central origin, and how many were of psychogenic origin. To my mind there is no doubt but that some of these were cases of polyneuritis, due to the process of gestation, but owing to the somewhat imperfect description one would hesi-

tate to make use of them. In 1867, however, Boulton described the case of a multipara, 38 years, who during the eighth month of her pregnancy lost the use of her limbs; could not stand; could not grasp anything, but was able to move her extremities fairly well. Her sensibility was also much diminished. Later her knees became contracted, and pain was experienced in extending them. She was constipated, her appetite was poor, and she fell off in weight. In regard to her mental condition, it is stated that she answered questions rationally, *but her memory was entirely gone.*

Two months after coming under observation she was delivered of an eighth month child in a state of decomposition. The patient made a good recovery from her confinement, but did not improve in memory, for in less than one week she had quite forgotten that she had ever been confined. The above case is no doubt one of polyneuritis, occurring during pregnancy, but except for a few other isolated case records the subject appears to have received scant attention until Möbius, in 1887, put together a series of seven cases of peripheral neuritis, affecting principally the median and ulnar nerves. Möbius' cases all showed themselves during the puerperium, but he advanced the hypothesis that they were probably due to some form of poison formed during gestation. In addition to those forms of neuritis localized to one limb, Möbius in a further communication in 1890 described a generalized form in a woman 30 years old, who four weeks after confinement complained of pain in the left hand, and pricking and burning sensations in both hands. Later the strength of her arms and legs became considerably diminished; all the muscles were flaccid, and wasting occurred in the hand muscles. Möbius makes no special mention of the mental condition in any of his patients. It is not until the appearance, in 1887, of Korsakow's classical description of the polyneuritic syndrome that we begin to have a more thorough understanding of the disease.

Korsakow grouped together a number of cases of apparent toxic origin, associated with polyneuritis, which were characterized by poor power of retention for recent events, disorientation for time and place, misidentifications, and confabulations, *e. g.*, the description of fictitious journeys and episodes. It was found that this psychosis developed most frequently on the basis of chronic alcoholism, but that it also occurred in connection with other

toxic, and infective agents, *e. g.*, in febrile states, lead poisoning, and pregnancy. *Later investigation also showed that the polyneuritic symptoms need not be a constant accompaniment of the psychosis.*

Korsakow reported the case of a woman, 28 years, who towards the end of gestation had œdema of the legs, as well as pain in the limbs, and in the neighborhood of both sciatic nerves. On October 3, 1880, a dead, decomposed child was born. On the next day the patient was in an excited, confused, fearful state. Later she developed anæsthesias and paræsthesias of her extremities, the muscles of the lower limbs were paralyzed, and then the extensor and interossei muscles of the arms and hands became affected, and finally the back and abdominal muscles. Pain was present in the back, in the arms, and in the region of the fifth nerve. Choreic and athetoid movements developed in the legs and arms, and there were also present twitching of the face muscles, swallowing difficulty, and a transitory speech disturbance. It was exceedingly difficult for the patient to concentrate her attention, her memory was poor for recent events, particularly for time, so that she could not tell whether an event had happened the day previously or three years previously. She asked the same question over and over again. After a period of ten months a marked improvement had taken place in the patient's condition. After a period of four years the patellar reflexes returned.

Owing to the fact that cases of Korsakow's psychosis occurring during gestation are exceedingly rare, I have felt that it would be of considerable interest to report two further cases, one of which was associated with tremendously generalized polyneuritis, while the other showed no polyneuritic symptoms, but mentally the picture was characteristic.

CASE 1.—A young married woman, 31 years, was admitted to the Henry Phipps Psychiatric Clinic on September 4, 1913. She had come of a healthy stock, and had developed normally. She married in April, 1906, and in April, 1907, her first child was born. During this first pregnancy she suffered from nausea and vomiting for three or four months, but did not show any nervous manifestations. The delivery was instrumental, but the puerperium was normal, and she nursed the child for nearly one year. Up until the onset of the present trouble she had been in her normal good health. Early in May, 1913, the patient became pregnant for the second time; towards the end of the same month her appetite became poor, and she started to suffer from nausea. During the months of June and July

she was vomiting almost constantly, and lost from 30 to 40 lbs. in weight. She became terribly weak, could only walk with assistance, and it was noticed that her feet would flop. In July, 1913, numbness in feet, legs, and hands developed, but up until about August 6, 1913, she was able to take a step or two. No mental disorder of any kind was noticed until about August 2, 1913, when one morning she suddenly made a number of entirely false statements, *e. g.*, that she had had three glasses of milk (when she had only had one), that a certain young lady had been to see her, that her sister had brought a red-haired girl into the room, that her brother (dead for four years) was downstairs, and when asked to go to town said that she had been there already that morning and was too tired to go again. She became depressed and tearful, thought that her husband was sick, and would cry in a hysterical way on seeing him. She did not seem to have any realization of where she was, kept absolutely no track of time, and when her birthday came around on August 4, denied that it was her birthday. On account of the fact that the patient, both mentally and physically, was getting rapidly weaker it was determined, on August 9, to produce an abortion, the patient now being three months pregnant. A slight laceration of the cervix resulted, her temperature became very slightly elevated, but the blood and urine examinations were negative, except for a somewhat diminished urea output, which a few days later became normal. Almost immediately after the abortion she became delirious, was fearful, thought that she was on a ship, that the ship was sinking, that some one was after her father to kill him, that the house was on fire, and that the fire was coming into her room. She then seemed to lose her voice, could only talk in a whisper, and had great difficulty in breathing. About ten days after the abortion had been performed she lost power in her hands completely, had incontinence of urine and feces, and became very dull. The patient had never at any time been addicted to the use of alcohol, and there was no known source of infection to account for her sickness.

*On admission* (September 4, 1913), the patient was delirious, and showed a very unstable emotional condition, laughing one minute and crying the next. She seemed frightened, talked constantly of having been bitten by a dog, but could not tell when, and frequently answered questions in an irrelevant way. She thought that the dog was in the room with her (visual hallucination), and said that she wanted to go and see the doctor about the dog-bite. She misidentified the physician and the nurse, and stated (erroneously) that another gentleman present was the physician's brother. She was completely disoriented for time and place, said that the month was February (September), could not tell the day or the year, and thought that she was still in her home town. She had no realization of her condition, denied that she had any trouble in any way, but admitted that her head felt dizzy.

*Physically.*—She was in a weak, exhausted, poorly nourished condition, and showed the characteristic symptoms of a generalized polyneuritis; *e. g.*, her hands were flexed at the wrists, extended at the metacarpal phalangeal joints and flexed at the phalangeal joints (double *main-en-griffe*). She

had a symmetrical atrophy of the small muscles of the hands on both sides, and except for occasional slight separation movements, could not move the fingers. The muscles of the forearms were also symmetrically atrophied and flabby, and she could not extend her wrists or carry out pronation and supination movements of the forearms. The muscles of the upper arms were fairly well preserved, so that she could raise her arms above her head. Her feet were kept extended in the position of talipes-equinus, and she was quite unable to move either her toes or her ankles. The muscles of the calves were atrophied and flabby, but at the knee and hip joints she could carry out weak flexion and extension movements, and could abduct and adduct the legs. She could not grip at all with either hand, and could not stand or walk. Her sensory functions were exceedingly difficult to accurately test, owing to her ready exhaustion, and to her confused mental condition. A rough examination showed that to touch sensations over the hands and forearms on both sides there was a sluggish response, and at times she failed to reply at all when touched on the hands or fingers. She failed to respond to pin-pricks over the hands and fingers, and could not differentiate between the head and point of the pin. This anæsthesia and analgesia gradually lessened up to the elbow on either side; above the elbow the sensibility to touch and pin-pricks seemed about normal. Thermal sensations were more or less accurately differentiated all over.

In the legs and feet the sensory disturbances were analogous to those obtained in the upper limbs; there was an anæsthesia and analgesia extending and gradually decreasing up to the knee-joint. Above the knee there did not seem to be any definite sensory disorder. Marked tenderness was elicited on deep pressure of the muscles of the legs and arms. The tendon and superficial reflexes were completely abolished on the two sides; there was involuntary micturition and defæcation.

With faradic stimulation so much pain was elicited that the examination could not be thoroughly carried out. To galvanism the dorsal interosseous muscles of the feet gave a typical reaction of degeneration, the anodal closing contraction being greater than the cathodal closing contraction; otherwise over the hands and forearms, and legs, the response to galvanism was sluggish, required a large current and the anodal closing contraction approximated the cathodal closing contraction.

In addition to the above, she had a double adductor paralysis of her vocal cords (Dr. Slack), in consequence of which she could not speak above a whisper. She showed a well-marked tachycardia, her pulse rate varying from 130 to 140 per minute, and being irregular in rhythm. Her breathing was entirely costal, owing to the fact that her diaphragm seemed completely paralyzed, and during inspiration the abdomen instead of being protruded was retracted; her breath rate varied from 32 to 40 per minute. There was no disease of the internal organs, and no difficulty in swallowing. Her temperature was 99.8°. A pelvic examination by Dr. Guy L. Hunner, blood examinations, and cultures from the throat were entirely negative. There was a trace of albumen in the urine.



*Following Admission.*—For several days the patient continued to show a very unstable, emotional condition; at one time she would be bright and laughing, and then again restless and tearful. At nights especially she would get fearful, would think that she was going to be killed, and talked a great deal about people dying. She suffered from visual hallucinations, insisted that people were hiding behind her bed, that some one was trying to kill her child, that bed-bugs, which she attempted to kill, were crawling over her. She remained completely disoriented for time and place.

On September 12, 1913, she was noted as much stronger; her temperature was 99.5°, her breathing was still entirely costal in type, varying in rate from 28 to 32 per minute, her pulse rate was still from 130 to 140 per minute, but was of much better force and volume than previously. She stated that she felt much less fearful than formerly, and only suffered from occasional visual hallucinations at night. Her head felt confused, she continued to misidentify those around her, and confabulated, saying that yesterday she had been up, had gone out driving, and paid a visit. She was still completely disoriented for time and place. Her power of retention was found to be exceedingly poor, as after two minutes she had entirely forgotten an address, the name of a city, and a color, which she had been asked to remember; even after three readings she was quite unable to give the gist of any short story read to her.

On the morning of September 18, 1913, it was noticed that the patient was in a semi-stuporous state, and during the day had a spell of tremendous excitement, waved her arms about, had an agonized expression, and complained of a sensation of smothering. Her pulse became weak and irregular, so that it could hardly be counted, her breathing was quick, intense, about 36 per minute, and her temperature rose to 102 degrees. For three days her condition was exceedingly critical, and she had to be frequently stimulated with strychnine, digitalis and camphorated oil. She finally made a remarkable recovery, and on October 1, 1913, she was able to speak more clearly, but her voice was still husky. She now seemed to have a better realization of things in general, but she still continued to be confused, was exceedingly emotional, and still remained disoriented for time and place. During October she showed a gradual and marked improvement both mentally and physically. She now did not confabulate at all, did not suffer from any hallucinations, and became oriented for place. She continued, however, to be very emotional, laughed and cried in an impulsive way, and was quite unable to keep track of time. Perhaps the most striking thing in her condition now was the marked defect in her power of retention; she would ask the same questions over and over again and in a few minutes after being visited by her friends had no recollection of their visits.

Physically, her voice was now quite natural, but in speaking she would hesitate and stutter over difficult words; her respiration was still costal in type, but was slower and easier, and now varied in rate from 24 to 28 per minute; her pulse continued to be on an average 130 per minute, but her temperature was quite normal. She regained control over her bladder and

bowels. Her arms and legs became much less tender, and she became able to carry out slight movements in the fingers, wrists and ankles. Menstruation restarted, and has been quite regular ever since. Since November, 1913, the patient has gone on steadily improving in every way. At the present time (April, 1914) she is bright and interested in everything that goes on around her. Her general behavior is that of a normal person, but as tested by word-pairs, short stories, repetition of numerals, and so on, her power of retention is still poor, but has considerably improved. Her memory for remote events is excellent. Emotionally, she is rather unstable, but gradually is getting better and better control of herself. Physically, she is able to take part in the occupation classes, can embroider, and can attend to herself generally. She can take a few steps without assistance, and can walk from 20 to 30 yards with assistance. Her cutaneous sensory disorders are improving, there is no tenderness elicited on deep pressure of the muscles, but the tendon reflexes cannot be elicited. Her pulse rate varies from 90 to 108 per minute, and her breathing is now thoracico-abdominal in type. Arrangements have been made for the patient to leave the hospital in a few weeks.

The case may then be briefly summarized as follows:

A multipara, 31 years, in the first month of her second pregnancy started to suffer from nausea and vomiting, and rapidly lost in weight. She then complained of numbness and weakness in the feet, legs, and hands. She became depressed, started to fabricate, lost track of time, and was getting worse so rapidly that an abortion was performed when the patient was three months pregnant. A delirium with fear reaction ensued, she lost power in her hands completely, had incontinence of urine and fæces, aphonia, paralysis of the diaphragm, and, probably, also at this time, tachycardia.

On admission to the hospital the patient was delirious, and showed the characteristic symptoms of a generalized polyneuritis. In addition, she had a double adductor paralysis of the vocal cords, and involvement of both the phrenic and vagus nerves. During her hospital residence the striking points in her mental condition have been the exceedingly poor power of retention, the tendency to confabulate, and the unstable emotional condition. Both mentally and physically a wonderful improvement has resulted.

The second case which I wish to report is, also, exceedingly interesting, and differs from the first in that the psychosis was not accompanied by any polyneuritic symptoms.

CASE 2.—F. I., 37 years old, was admitted to the Henry Phipps Psychiatric Clinic on December 21, 1913.

*Family History.*—Paternal grandfather was excitable, and her paternal grandmother had hysterical spells. Her maternal grandfather was eccentric. Her father, one brother and two sisters were described as nervous.

*Personal History.*—The patient was the youngest of a family of seven. She is stated to have been a healthy child, and to have developed normally. She was clever at school, and was interested in everything. She was very even-tempered, was not extreme about anything, and was devoted to her family and home. In 1896 she married, when 20 years old; her married life was exceedingly happy. Except for an attack of typhoid fever one year after marriage she had been perfectly well up until the onset of the present sickness. She had never taken any alcohol, and no history could be obtained of any toxic or infective agent. She had had three previous pregnancies, each of which had been accompanied for two months by vomiting, but in none of these pregnancies were any nervous or mental symptoms noticed.

*Onset of Present Sickness.*—The patient became pregnant for the fourth time about August, 1912. During the second month of her pregnancy she started to suffer from uncontrollable vomiting, which continued during her entire pregnancy. On account of her vomiting she was nourished during the last five months of her pregnancy principally by nutrient enemata, and altogether lost from 60 to 70 pounds in weight. Her labor was easy, and a full term healthy child was born on March 24, 1913. For two months previous to the birth of her child her husband had noticed that she could not remember things that happened from day to day, but remote events were accurately retained. She described herself as confused, complained of a feeling of pressure and weight in her head, but knew every one around her and was clear in regard to her surroundings. She became apathetic and uninterested, and after the birth of the child hardly seemed to realize that she had had one. About two months after the birth of the child she accused her husband of infidelity; stated that something had been put into a glass of water to affect her, and later that her mind was full of all kinds of profane thoughts. She tended to fabricate, said that a physician had told her certain things in regard to her sickness, and that three ladies had told her that they had suffered just exactly as she had. (All of which statements were false.) On her journey to the hospital she told about being able to see Christ, and told about carrying on conversations within her head with Him. There was no history of any polyneuritic symptoms.

*On admission,* the patient was apathetic and listless, but talked freely, and answered all questions quite promptly and relevantly. She complained of a spinning sensation, and a feeling of pressure in her head, which seemed in some way to affect the nerves of her eyes; she said that she could not read; could not develop any interest in anything, and felt as if she was a stranger to herself. She described many other curious sensations and feelings, *e. g.*, that her brain consisted of two parts, one normal and one abnormal, that there were obstructions in the blood-vessels of her brain. One of the most peculiar of her symptoms was a pseudo-hallucinatory state in which she saw the figure of Christ, and at other times had visions of

beautiful forests, knights, and gay people. In reference to these things she would say: "It is all a figment of the brain I suppose, but it is just as real as my being here talking to you now." In addition to the visions, from time to time she would seem to hear a voice telling her to "be comforted," and that also she clearly recognized as being "purely a mental thing—a thought." At first she was correctly oriented for time and place, but it was very striking to notice how poor her memory was for the names of persons, and her total inability to give an idea of the onset and course of her sickness, and of events immediately preceding admission. The later period of her gestation was apparently almost a blank to her. She did remember that her baby had been born towards the end of March, 1913, but absolutely denied that there had been anything wrong with her in any way until six weeks after its birth. She had no idea, for instance, that for several months she had been nourished almost entirely by rectal enemata; she could not tell when she had come to Baltimore (three days previous to her admission); could not tell what hotel she had stayed in, and did not remember her examination by a neurologist. She had entirely forgotten a name, address, and color, after four minutes. Her memory for remote events, and her grasp on matters of general intelligence were well retained. She had a very good realization of and insight into her condition, frankly admitting that her memory for recent events was poor, and that her pseudo-hallucinatory state was due to her imagination and general nervousness.

*Physically*, the patient was a well-nourished woman, who showed no disease of the internal organs. Her sense of smell was defective on both sides, as she could not recognize cloves, peppermint, or whiskey. Otherwise, there were no neurological signs. Her pulse, temperature, and respiration rate were normal.

*Following Admission.*—During the whole period of the patient's hospital residence she continued to present almost the same picture as on admission. She had to have some one constantly with her trying to encourage, stimulate and employ her in every way, but despite the utmost help she would constantly complain of peculiar spells, in which she would close her eyes tightly and show facial grimacing. In these spells she would complain of something of the nature of an iron weight pressing against her brain, and would lose all use of herself. She suffered from sensations as if she were falling from a great height, and her pseudo-hallucinatory state remained constant.

The feature, however, which was of most interest in the case was her exceedingly poor memory for recent events, and her defective power of retention. Her retention was tested by means of giving her three different things to remember, by short stories, by word-pairs, and repetition of numerals; with all of these gross defects were easily elicited. In addition to these defects, a good idea of her state of mental confusion may be gotten from the following facts: One morning she put on her dress before her undergarments; another time she put two dresses on; she was occasionally unable to find her own room on the ward; she would not infrequently after a bath start to put her clothes on without drying herself. She, also, during her hospital residence, became disoriented for time, could never tell

the day, date, or month, and was uncertain as to whether the year was 1913 or 1914. An attempt was made to benefit the patient's condition by means of thyroid extract medication, but no benefit resulted. The patient was discharged on April 12, 1914, in an unimproved condition.

In this case, then, we have a woman 37 years old, who up until the onset of her present sickness seems to have been healthy and normal in every way. In all three previous pregnancies we have a history of vomiting of short duration. During her last (fourth) pregnancy, however, uncontrollable vomiting apparently played such a rôle that the patient became emaciated, and during the last two months of gestation developed a psychosis characterized by apathy, forgetfulness, suspiciousness, and then later by a peculiar pseudo-hallucinatory state, and a tendency to fabricate. During her hospital residence her mental confusion, her exceedingly poor power of retention, her disorientation for time, and her pseudo-hallucinatory state were the outstanding features.

How are we to interpret such a condition? From the point of view of symptomatology many of the symptoms might tend to make one think that here we are dealing with a case of dementia præcox, and that the pregnancy was merely incidental. In support of such a view the apathy and listlessness, the peculiar ideas, such as one part of her brain being normal and the other abnormal, and the pseudo-hallucinatory state would be advanced. After all, however, the point which impresses one most is her extraordinary defect in memory and in power of retention, and that associated with good insight into her condition is so foreign to the types of dementia præcox that we know as alone to be almost sufficient to rule out such a diagnosis. The explanation that I feel justified in putting forward is that here we have an individual who, on account of the uncontrollable vomiting of pregnancy, became so emaciated and exhausted that definite organic changes resulted, in consequence of which a specialized portion of her memory became deeply affected. With such a lowering of the general level, it seems to me quite understandable why the psychogenic material which no doubt has been dormant in the patient should be expressed. This case, as far as a fairly thorough review of the literature has taken me, seems to be unique, but is in harmony with Korsakow's original observation that "*polyneuritic symptoms need not be a constant accompaniment of the psychosis.*"

Furthermore, this case corresponds to those of the toxic-infectious group which Hoch has designated by the term *Amentia*. In connection with his cases Hoch has emphasized the fact that Freudian mechanisms undoubtedly play an important rôle, but do not alter the main facts of the clinical picture.

Before attempting to draw any general deductions from these two cases, it would seem well to consider some of the cases described by others, so as to see whether we can get at any factors which are more or less constantly present. I want especially to direct attention to those cases which have shown a Korsakow's symptom-complex, and to those with a generalized neuritis, but without any mental symptoms. I have already made mention of Boulton's case, and of the cases described by Churchill, Möbius, and Korsakow.

Madge in 1871 reported the case of a multipara, 36 years, who at the fourth month of her third pregnancy started to suffer from severe pains in her hands and feet, which became exceedingly sensitive and painful. Later the patient developed an anæsthesia and complete paralysis of her hands and feet. In this case the patient's mind is stated to have been confused, and her memory was impaired. Under electrical treatment improvement occurred in her general condition. It is very interesting to note that about one year after her illness had started the patient was delivered of a dead foetus of about four months, which to all appearance had been retained in the uterus for many months.

*Whitfield's Case.*—A multipara, 40 years old, on August 7, 1888, gave birth at full term to her seventh child. From the beginning of her pregnancy the patient had suffered from uncontrollable vomiting, on account of which she lost about 80 pounds in weight. Two weeks previous to her confinement her legs felt cold, she partially lost the use of them, and had to be assisted up and down stairs. The day after labor vomiting ceased, but she soon started to complain of pain and "pins and needles" in her legs, and thirteen days later had almost lost the entire use of her arms and legs. Pain was easily elicited on deep pressure over the nerve trunks. The knee-jerks and other tendon reflexes were absent.

The case described by Desnos, Joffroy, and Pinard, again emphasizes the important part played by uncontrollable vomiting in the development of such states.

A multipara, 41 years, had had two previous pregnancies, and was in an anæmic condition. During her third pregnancy the uncontrollable vomiting was alarming, and at the end of the fourth month the lower limbs were markedly atrophied, and this was followed two or three days later by an atrophy of the arm muscles. There was no reaction of degeneration, no disorder of sensibility, and no loss of sphincter control. There was a marked diminution of the patient's intellectual power, especially of her memory. Artificial abortion was performed, and was almost immediately followed by a betterment of the patient's condition. Function finally returned to the muscles and the patient was cured.

Polk, under the title "Mania and Multiple Neuritis in Pregnancy," described a case which terminated fatally at the fifth month. The term "mania" is apparently used by Polk as synonymous with "excitement," because there is nothing at all in the description of the case to make us think of a manic-depressive excitement. On the other hand, the mental condition as described by Polk seems to have consisted essentially of a delirium with fear reaction, and a poor memory for recent events. The case indeed is very similar to the first one reported by me in this paper.

A multipara, 28 years, during the second month of her second pregnancy started to suffer from nausea and vomiting, on account of which she became markedly emaciated. At the fourth month of gestation the vomiting ceased. At this time the patient became delirious and excited, talked in an incoherent way, and seemed to have no realization of her condition or surroundings. She thought that there were gloves on her hands, and asked to have them pulled off, and expressed many rapidly shifting "delusions." She soon forgot every statement made to her. Associated with this mental condition, there was paralysis of both the flexor and extensor muscles of the hands, entire loss of grip, atrophy of the forearms, paralysis of the muscles of both legs with foot-drop, some movement in the thighs, but none in the toes or feet. She complained of various paræsthesias and tenderness was easily elicited on pressure of the muscles. There was involuntary micturition. The respiratory muscles next became affected, and death resulted at the fifth month.

In Handford's three cases the paralysis came on immediately after confinement; the third one should probably be ruled out

altogether, as not belonging to this class of cases. In none of the three cases have we any mention of the mental condition of the patient.

CASE 1.—Multipara, 43 years, three days after confinement lost the power in her legs completely, had the sensation of “pins and needles” in the arms, a short time later paralysis of the arms. The muscular sense became impaired, there was impaired cutaneous sensibility, and greatly increased deep sensibility; knee-jerks were absent, the reaction of degeneration was present in both arms and legs. In twelve months the patient was comparatively well.

CASE 2.—Woman, 34 years, had complete paralysis of extensors of toes and flexors of ankles, with weakness of most of the other muscles of the legs coming on immediately after confinement. There was both superficial and deep hyperæsthesia; no contraction in the muscles below the knee to strong faradic stimulation. Complete recovery resulted.

CASE 3.—Multipara, 31 years, immediately after confinement complained of difficulty in walking and weakness in her arms. The knee-jerks and superficial reflexes were absent, and the cutaneous sensibility was diminished in her arms and legs. In addition, she had a double ptosis, a divergent strabismus, and a complete internal ophthalmoplegia in both eyes. Her optic discs were normal. After a period of five years the patient's condition was unchanged.

Korsakow and Serbski have described a case with autopsy, in which well-marked degenerative changes were found in the peripheral nerves, especially in the most distal nerves, *e. g.*, dorsalis pedis. The other nerves most affected were the median, ulnar, phrenic, abducens, acoustic, and vagus. In the spinal cord an increase of connective tissue was found in the columns of Goll, and in the lateral columns, especially on the right side. No pathological changes were found in the brain. The patient was 27 years old, and at the fourth month of an extrauterine pregnancy started to suffer from vomiting. The case was complicated by a parametritis, and an abscess in the iliac fossa. She was forgetful, confabulated, had a retention defect, was dull and tearful, and had visual hallucinations. The muscles of the legs and arms were weak, pain was elicited on deep pressure, but the knee-jerks were retained. Her pulse was 140 per minute.

Another case with autopsy has been reported by Solowieff. This case in contrast to most of the others occurred in a primipara. The patient was 24 years old, and at the third month of her pregnancy was in a very poorly nourished condition, owing to per-



sistent vomiting. She became restless, suffered from headache, and paræsthesias of the lower extremities, which were sensitive. She became unable to walk, the knee-jerks were lost, pain was elicited on deep pressure, and the reaction of degeneration was present. Later the diaphragm became weak. Her pulse varied from 130 to 160 per minute. Mentally, she is described as having been delirious and very forgetful. At autopsy degenerative changes were found in the phrenic, peroneal, median, and vagus nerves.

Lunz has described a case in which, owing to an early involvement of the cranial nerves, the similarity of the condition to a diphtheritic paralysis is emphasized.

A woman, 24 years old, gave birth to a weakly child, which died after two weeks. A short time later the patient experienced difficulty in swallowing and choking; then diplopia and dizziness developed. First the right hand felt dull, later the left hand and arm, and later still the lower extremities. Gradually, the swallowing difficulty became worse; slight weakness showed itself in both sixth nerves; slight paresis of the left side of the face, the tongue was protruded to the left, and the palate was not well elevated on phonation. She developed a *main-en-griffe* on the left side, became unable to walk more than a few steps, and pain was elicited on deep pressure of the muscles. The triceps jerk was absent on both sides, but the other tendon reflexes in the arms were retained; the knee-jerks were absent; the electrical excitability was diminished.

One of the most important series of cases (4) has been published by Eulenburg:

CASE 1.—One-sided neuritis, with atrophic paralysis in the median and ulnar spheres. The patient was a primipara, 28 years, who ten days after labor experienced severe diffuse pain in the left arm, paralysis and atrophy, which, after a period of two months' treatment with massage, cleared up.

CASE 2.—A case of neuritis of the right tibial nerve with subsequent recovery. This case was associated with vomiting.

CASE 3.—One-sided neuritis in the region of the right sciatic nerve. The affection started at the end of the first week of the puerperium. The case likewise was associated with vomiting.

CASE 4.—A multipara, 27 years, who during her second pregnancy had to have an abortion performed at the fourth month on account of severe vomiting. Eight days later she had the feeling that the lower part of the

body was paralyzed. She next suffered from severe pain, and in 24 hours there was complete paralysis of the legs, then paresis of the arms, the back muscles, and finally aphonia and paralysis of swallowing, all in the course of 48 hours. During the course of the next eight days she became insensitive and confused. After several weeks the aphonia and difficulty in swallowing disappeared, the motility returned to the arms in the shoulder and elbow regions, but the fingers and hands, as well as the lower limbs, remained completely paralyzed. Pain was elicited on deep pressure of the muscles; at first there was some superficial sensory disorder, but later very little. The knee-jerks were absent on both sides; the reaction of degeneration was present.

In most of the cases so far referred to uncontrollable vomiting has been a prominent feature, but Elder has reported two cases, neither of which suffered from vomiting.

The patients were multiparæ, and in each the symptoms started about the sixth month of pregnancy. The symptoms started with tingling and paræsthesia, chiefly in the hands, but also in the feet. There was little or no paresis, but sensation was affected in both cases. In both cases alcohol, diphtheria, glycogenia, and lead could be ruled out. After delivery the improvement in both cases was rapid. Butler's case followed delivery, but from the description there can be little doubt about the diagnosis.

A married woman, 37 years, had at the fourth month of pregnancy a still-born child. Three weeks later she developed a "milk leg" on the right side, suffered from vomiting, and started to fall off in weight. Later she lost power in both legs; numbness and tingling developed in the hands and arms, which was later followed by weakness. On examination there was marked atrophy of all the muscles of the upper and lower extremities, and also of the trunk muscles. The knee-jerks were absent; tenderness was elicited on deep pressure of the muscles. The electrical reactions were impaired. Improvement occurred under massage and general measures.

One of the best and most comprehensive articles on this subject is that of Reynolds, who in 1897 gave a general summing up of the known facts, and described one personally observed case.

Primapara, 24 years, when four months pregnant, was suffering from such severe and uncontrollable vomiting that an abortion had to be procured. Following the abortion, the patient suffered from complete loss of sphincter control for two or three weeks. About a month after the abortion her feet felt cold and numb,

and a month later still her legs were very weak, and sensation in them was almost entirely abolished; there was no affection of the upper extremities. Finally, she could not stand or walk; her knees were contracted, and the knee-jerks could not be obtained. The patient improved under massage. Two years later the patient had a successful second pregnancy without vomiting, and without untoward results.

Saenger's six cases are also all interesting, in that they all developed after an apparently normal labor.

CASE 1.—A woman, 36 years, on February 12, 1896, had a normal labor. Previous to the birth the patient had experienced some weakness and tingling in the left arm, and occasionally a feeling of pain. Shortly after the birth a dull feeling, weakness, and some pain developed in the right arm. After some days there was complete paralysis of both arms and legs; pain was elicited on deep pressure over the nerve trunks; the tendon reflexes were absent. Later weakness developed in the diaphragm and back muscles; transitory swallowing difficulty, and rectal paralysis; the bladder was not affected. A partial reaction of degeneration was elicited in the tibialis anticus, and in the peroneal muscles. By Christmas, 1896, the patient was completely well.

CASE 2.—A woman, 30 years, several weeks after a normal labor and puerperium developed an acute generalized polyneuritis of the nature of a Landry's paralysis. There was a transitory rectal paralysis. Sudden death resulted. No changes were found in the cord or brain. A well-marked degenerative neuritis was found in the peripheral nerves, and also in the vagus nerve.

CASE 3.—A woman, 34 years, had a normal labor, and no fever during the puerperium, but developed a dull feeling in her fingers, and then weakness in both legs. There was some pain and tenderness of the bladder. Soon there developed complete paralysis of both the upper and lower extremities, pain was present on deep pressure of the muscles, slight cutaneous sensory disturbance, and absence of the tendon and skin reflexes. The reaction of degeneration was elicited in the small muscles of the hand, and in the calf muscles. Complete recovery resulted after a period of four months.

CASE 4.—A woman, 32 years, five days after labor developed a paresis of the left median and ulnar nerves. The patient recovered in a few weeks.

CASE 5.—A woman, 28 years, ten days after labor developed pains in her legs, and then in the arms. After some days there was a neuro-myositis of the right radial and median nerves; after some weeks the same affection occurred in the left arm, but to a lesser degree. This patient also recovered.

CASE 6.—A case of double-sided retro-bulbar neuritis.

In none of these cases, with the possible exception of the last, was there any suspicion of a febrile process.

Danziger's case is in many ways similar to that of Lunz, and is of interest, owing to the early involvement of the cranial nerves. A primipara, 21 years, 14 days after normal labor experienced difficulty in swallowing. On the next day there was hoarseness, twitching of the face, and general pain. The soft palate was only very slightly raised on phonation, the speech was nasal, and in swallowing fluid was regurgitated through the nose. The right vocal cord was in a cadaveric position. The arms and legs were weak, and pain was elicited on pressure. The knee-jerk was absent on the right, and diminished on the left side. A gradual recovery resulted.

A most interesting case with autopsy has been described by James Stewart. A multipara, 33 years, about two months previous to confinement started to experience numb feelings in her limbs. In the previous pregnancies she had suffered from severe vomiting, and in this last pregnancy the vomiting was so severe that for six weeks she was confined to bed. She was emotional, but otherwise her mental condition is described as normal. About nine weeks after labor she showed considerable loss of power in the muscles of both lower limbs, but in no single muscle, or group of muscles, did it reach an absolute degree; it was distinctly more marked in the most peripherally situated muscles. In both upper limbs a similar, but less marked paralysis was present, being also more marked in the distal parts. There was, however, no definite foot-drop or wrist-drop. The feeling of numbness in the lower limbs and abdomen extended up to the eleventh thoracic segment, and in the arms it extended up to a point midway between the elbow and shoulder. Touch was diminished over the numb areas; pain and thermal sense were unimpaired. The calf muscles were very tender on pressure, the knee-jerks were normal, and the electrical reactions were not disturbed. The pulse was rapid varying from 80 to 120 per minute; the respiration rate was from 24 to 30 per minute. The urine at all times was free from any abnormal ingredients. Later there was complete wrist- and foot-drop, and the knee-jerks became lost. Later still the diaphragm became paralyzed, and death finally resulted from pneumonia.

The examination of the nervous system was made by Dr. Shirress. The brain, spinal cord, and ganglia, were removed; also both sciatics, musculospirals, anterior crurals, peroneals, anterior tibials, pneumogastrics, and phrenics. Microscopically, the peripheral nerves by Marchi's method showed the signs of a true parenchymatous degeneration, the hæmotoxolin and Van Gieson's method revealed also a marked interstitial inflammation, the blood vessels being distended with numerous hæmorrhages in the epi- and endoneurium. The pneumogastric and phrenic nerves showed more of a parenchymatous condition than interstitial changes. In the cord a scattered degeneration was found in the posterior columns. Degenerated fibers were also found in the lateral region of the cord (direct cerebellar tract) in the upper dorsal and cervical segments. The posterior roots were degenerated along the whole length of the cord. No changes were found in the anterior roots. Marked and advanced chromolytic changes of the peripheral, central, and perinuclear varieties were found in the ganglionic cells of the gray matter in the anterior horns, and in Clark's column. The most marked changes were found in the fifth, sixth, and seventh cervical segments.

Other cases with autopsy reports have been described by Mader and Lindemann. Mader's case was associated with persistent vomiting, and at autopsy extensive neuritic changes were found in the sciatic, tibial, and peroneal nerves; the cord was not involved. In Lindemann's case, in addition to there being a parenchymatous neuritis, degenerative changes were also found in the liver and kidneys. Still another case with autopsy has been reported by Dustin:

A multipara, 30 years, at the sixth month of the last pregnancy suffered from uncontrollable vomiting. Following the birth of a macerated fœtus a quiet delirium set in without fever. She developed pain in the left leg, which became contracted; and lost control of her sphincters. Her pulse varied from 100 to 108, and her breathing was above 30 per minute. The leg muscles became atrophied, pain was elicited on deep pressure, and the knee and Achilles jerks were absent. At the autopsy degenerative changes were found in the crural and sciatic nerves. At the third lumbar segment of the cord there was chromolysis and vacuolation of the anterior horn cells. The anterior and posterior roots were normal.

In 1913 Hahn described a case which clinically was similar to that of an alcoholic Korsakow psychosis:

A multipara, who three years previously in the third month of pregnancy had suffered from severe vomiting, and had two epileptiform attacks. During the last pregnancy vomiting again started during the third month, then nystagmus developed, and the pulse became above 100 per minute. An artificial abortion was performed, which stopped the vomiting, but the general condition of the patient was not improved. The patient became very dull, the nystagmus became more marked, a retinal hemorrhage occurred, both legs were paralyzed, the patellar reflexes were lost, and there was a sphincter paralysis. All these severer symptoms occurred about 12 days after the artificial abortion.

Mentally, the patient at first was dull and confused, but later a delirious condition developed, in which she thought that she held her baby in her arms, kissed it, and showed it to the other patients. After the acute stage had passed the patient lapsed into a state of mild euphoria with spells of irritability, had an exceedingly poor power of retention, and an amnesia for her hospital residence. In the course of eight months her power of retention showed considerable improvement.

Before concluding this review of the literature, I would just like to mention the cases and communications of Hösslin, Dufour and Cottenot, Stelzner, Burr and McCarthy, Craik, Cross, Buzard, Aldrich, Borham, Köster, Johannsen, and Bernhardt.

#### GENERAL CONSIDERATIONS.

It is an accepted and well-known fact that the equilibrium of health is more apt to be disturbed during pregnancy than at almost any other time. Wright believes that during pregnancy there is a general systemic toxæmia, due to the more or less faulty action of the liver, intestines, and kidneys, and toxins can be found chiefly in the blood, liver, and muscles. Wright emphasizes the fact that the slightest departure from health during pregnancy should make one suspect a toxæmia, and some of the symptoms he lays stress on are: salivation, disorders of digestion, and constipation, general malaise, anæmia, nervous disturbances with headache, disorders of vision, irritability, deficient urine excretion, and albuminuria. Bouffe de Saint-Blaise (quoted by Hösslin), in considering the toxins of pregnancy, has also emphasized the changes in the liver and kidneys, and his work, of course, is of particular interest in relation to Lindemann's case, where there was not only a parenchymatous neuritis, but also degenerative changes in the liver and kidneys.

Eulenburg, in common with most others, believes that some cases, although only observed during the puerperium, are in

reality cases of the neuritis of pregnancy, and he advanced the hypothesis that impaired gastrointestinal functions during the gravid period led to an autointoxication through the formation in the gastrointestinal tract of some substance—possibly acetone—which is absorbed, and causes the neuritis.

Reynolds had the idea that persistent vomiting set up an acetonæmia, and that acetone, or some allied product, produced the neuritis, just as may happen in the neuritis of diabetes. So far, however, no evidence has been produced to substantiate the acetone theory, and we have no knowledge of the nature of "the toxin" which is supposed to be responsible for the condition.

The relation which hyperemesis gravidarum bears to the condition seems to be a close one, especially in those cases which show a generalized type of neuritis. Bayle has even gone so far as to say that the generalized forms only occur after severe cases of hyperemesis, and it was no doubt on account of the same supposition that Clifford Allbutt believed that the vomiting and the neuritis were due to the same toxin. A number of cases, *e. g.*, those of Lunz, Saenger, Korsakow, Danziger, and Elder, have now, however, been described in which no mention is made of the occurrence of hyperemesis gravidarum, and therefore Allbutt's and Bayle's supposition can hardly hold good. But from the very frequency of its occurrence there can be no doubt that hyperemesis plays a most important rôle, whether or not it is from the hyperemesis *per se*, or from the fact that the hyperemesis is responsible for causing a general exhaustion of the patient, thus rendering the patient more susceptible. Out of 92 cases of all grades of the neuritis of pregnancy collected by Hösslin, hyperemesis gravidarum was present in 19. Hösslin, however, remarks that this number assumes much greater proportions when it is stated that the cases of neuritis which gave a history of hyperemesis were much the most severe. Out of 46 cases in which all the extremities were paralyzed, hyperemesis was present in 16, while in the anamnesis of 37 cases where only the facial nerve, or one, or only the upper extremities were involved, hyperemesis was not reported. According to Hösslin, the fact that the hyperemesis is associated with the more severe cases is proof positive against the hysterical nature of the vomiting, and he conclusively states that he knows of no case of hysterical vomiting in a non-pregnant woman associated with polyneuritis. Since Hösslin's article was

published a number of other cases have been reported, *e. g.*, those of Dustin, Dufour and Cottenot, Hahn, and the two which are the subject of this paper, and in all of these cases persistent vomiting seems to have been an important factor.

In addition to the hyperemesis, the weak, exhausted, emaciated, condition resulting from it, the retention of a macerated foetus, the retention of placenta, and the involution of the uterus, have all been supposed to have played a part. At present, however, we must content ourselves with the summing up of Aldrich, and say that the condition is one which usually occurs in women exhausted from vomiting, and that probably some toxin is formed within the body of the mother or child which has a selective action on the nerve tissue of the pregnant woman.

Another point which may be emphasized is the much greater frequency with which multiparæ are affected as compared with primiparæ, the reaction apparently being in the nature of an anaphylactic phenomenon.

The indications and the time for the production of abortion are questions for the obstetricians, but it may be well to remark that most of the French observers state that when the pulse increases to 100 or over per minute an abortion should be immediately produced. The points, however, which I especially wish to lay stress on are:

(1) The pregnant state must in certain cases be recognized as an important etiological factor in the production of peripheral neuritis, and of that condition known as Korsakow's syndrome.

(2) The neuritis caused may be either (1) local, *e. g.*, affecting one nerve or one limb, or (2) diffuse, *e. g.*, affecting all the limbs, and certain of the cranial nerves.

(3) The mental disorder characteristic of the condition is usually associated with a generalized polyneuritis, but, as evidenced by one case reported here, it may occur alone.

(4) The frequent history of hyperemesis gravidarum in association with the generalized forms of the disorder is so striking that it suggests a possible line of approach as to the elucidation of the nature of the toxin.

(5) Those patients who in previous pregnancies have suffered from severe vomiting, or other serious toxic phenomena, should be strongly urged to avoid any further pregnancies.



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## THE INTEGRATIVE FUNCTIONS OF THE NERVOUS SYSTEM APPLIED TO SOME REACTIONS IN HUMAN BEHAVIOR, AND THEIR ATTENDING PSYCHIC FUNCTIONS.<sup>1</sup>

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The object of this paper is to harmonize certain psychic functions with physiological and integrative functions of the nervous system. The older neurological, descriptive and static psychiatric studies seem unable to penetrate into the more subtle problems of the pure psychoses. Their service lies better in drawing parallels between anatomical structures and regional functions of the nervous system. These studies, and the researches attending derangements of metabolism which cause psychoses, have great value in discriminating the organic and intoxication factors in the psychoses. However, the pure psychoses, as psychogenetic problems, require an entirely new interpretation, a special technic and an unbiased attitude of mind to understand and feel their existence and true value as causes of abnormal behavior; and we wish to show that certain psychic functions producing psychoses are in harmony with more recent interpretations of the functions of the nervous system.

Habits are a very important factor in the regulation and evolution of behavior, through the cultivation of stability and resistance, but they only train and organize limited resources of reaction. Habit formation is only possible when the instinctive and emotional functions are capable of modification. When emotions are intensely generated they always cause more or less prolonged derangement of the habitually used modes of psychomotor expression. Habits, as the usual psychomotor channels of expression,

<sup>1</sup> This paper, read before the American Medico-Psychological Association at Baltimore, May 23, 1914, was revised before publication in *The Psychoanalytic Review*, Vol. II, No. 2.

though often conducive to a vulnerable status of the personality, which may collapse under strain, do not seem in themselves to be sufficient to produce a pathological emotional state. Usually we find that a conflict with the habit or trend, which can neither be effectually repressed or disorganized by the individual, nor allowed free play, causes the distress, and the reverberations from the conflict inevitably to overthrow from the voluntary psychomotor apparatus into the involuntary psychomotor systems or visceral fields.

This phenomenon of overflow of nervous energy into the involuntary muscular system, when the required outlet through the voluntary muscular system is inhibited, is a frequent occurrence. Emotional states have characteristic outlets through the voluntary motor systems for discharge. Then they seem to be capable of more or less voluntary control. The inference is that certain disturbances of the involuntary muscular system are often best adjusted by releasing the tension through a definite and free use of the voluntary muscular system; for example, in expressions of anger, grief, sorrow, etc.

A physician was fishing one morning, just after eating his breakfast. He hooked a goodly sized bass. After a pretty fight, he succeeded in drawing it up to the side of the boat, but as he tried to land the fish it unfortunately escaped. A minute or so later he was further surprised by the unexpected regurgitation of his breakfast. The connection of this physiological reaction with the more or less repressed emotional reaction might well suggest an overflow phenomenon of a simple kind; and similar more or less complex ones undoubtedly figure in the conflict reactions of many psychogenetic disorders.

Although the introspective studies of the emotions in academic psychology are rather unheeded by psychiatrists, they have a certain value and accuracy which may well be used here. A review of the works of many of the teachers of academic psychology show a general recognition of the phenomenon that ordinarily, whenever obstacles to progress are encountered (perceptual or ideational), the motor discharge is thrown back upon the vital processes of the organism, and straightway we have an emotion.<sup>1</sup>

<sup>1</sup> Angel's Psychology (p. 381).

Analyses of psychoneuroses have demonstrated repeatedly that the above is true. Repressed psychomotor discharges or affects may not cause a classical emotional state, but such serious visceral and vasomotor disturbances that often the individual's health is impaired, and may become the subject of a chronic complaint, in some cases with an irreparable distortion of the personality.

Whether we favor the view that an emotion is the result of an intracerebral change and reinforced by the visceral and vasomotor reactions, or that it is in itself the cerebral and psychic reaction to the vasomotor and visceral changes, we may accept that certain factors in the physiological mechanics of emotions are constantly present, namely :

1. That the emotional state is aroused by some kind of cerebral stimulus.
2. That it is a type of reflex action.
3. That it involves essentially the cerebral adjustment towards essential changes in the viscera, glands and vasomotor system.

James long ago emphasized the importance of knowing the "physiological mechanics" of emotions; that mere classifications of emotions had little value, and one seemed to be as good as another. This holds as well for abnormal emotional states and their interpretation which constitutes an important part of psychiatry. It is generally accepted in psychology that instincts and emotions are types of reflex action. Sherrington's conception of a reflex includes a receptor, conductor and effector, which latter is principally connected with motor cells. He has also shown that they are so integrated as to work in types or systems under usual conditions. Psychology tends to divide all motor activity consequent upon cerebral change into instincts, emotions and voluntary acts. How are we to understand the mechanism?

There are, anatomically, physiologically or functionally classified, two great groups of effector cells: those connected respectively with the voluntary and the involuntary muscular systems. The effectors of the voluntary muscle cell group type are ordinarily used for outward, instinctive expression; and the involuntary muscle cell group effectors seem ordinarily to be used in inward or emotional changes. Reflex actions may use both systems of effectors, as in anger. If the discharge is inhibited from the voluntary system the viscera and vasomotor systems receive the surplus

motor discharge. The analysis of such conditions show that such visceral disturbances in their very nature are not transitory, but may endure for some time, and moreover such occurrences tend to develop a predisposition to this type of readjustment.

Further analysis of such cases seem to show a constant tendency of this repressed affect to cause a "set of mind," or tendency to react characteristically until it can be discharged *adequately* through a *suitable* use of the voluntary motor system. Frequently the accumulation of such affect may become so marked that discharge through the voluntary system is inhibited by the desire to maintain an outward appearance of self-control; especially if once repressed it cannot be freely expressed because of the persistence of the inhibitive mechanism or censorship. Many of us have probably experienced the physical discomfort when unable to recall a familiar name under urgent circumstances. Ideas and perception may cause the repression, or the genesis of an emotional state. When ideas of self-censorship are associated with an exogenous censor they invariably cause a repression of the feelings, or maintain the old repressions which were the painful readjustments. The first work of the analyst is a physiological, as well as a psychological one; namely, to readjust the ideas or perceptions causing the repression. This is not an easy thing to do, and may require great care and time. When it is not successfully performed little real insight or success will attend the treatment of the case as long as the patient is unable to express the affect and make a readjustment.

A case of hysteria would have most violent states of hatred for her husband and mother-in-law, but she never felt able to speak out her feelings because she held herself partly responsible for her difficulties. Also she was afraid of losing her self-control and violating their affections for her. Each repressed idea-emotion complex may become the unconscious receptor of an unsuspected, "adequate" stimulus and arouse an unforeseen and not understandable affect. This same case of hysteria could not understand why she should develop violent hatred for a physician when he removed a bloody sponge from her ear, or become nauseated when red fruits and vegetables were placed on the table for the meal.

The presence of such repressed complexes can be frequently found by association tests, automatic writing, and dream analysis. The complex serves as a receptor and the stimulus shows its effect in a diffusing wave of reactions (confusion) and necessitates a diversion or substitution to establish a tolerable coordination and the substituted reaction then has the rôle of a kind of defense against what would be unacceptable. The psychosis or psychoneurosis is the effect, the picture, or result of the conflict, and usually represents the individual's unconscious expression of all the determinants of the conflict. Under the circumstances, when a pathological compromise or adjustment is established it seems to be valuable to the patient. In such cases one is often struck by the logical, almost quantitative, balance of forces. Many of the determinants of the conflict may not be accessible to consciousness at the time, but be repressed. In such instances the patient is the host of a conflict and may not know it except for the somatic distress or inability to adjust to a situation. Sometimes the somatic reaction may even feel like an advantage and the patient may be surprised and disappointed at losing it on recovery.

One of my cases of hysteria who did not know that her hands were anæsthetic for heat and cold, was very much pleased with her ability to wash dishes in hotter water than any of the other patients could use. She could not remember when this faculty developed. After the analysis and readjustment her cutaneous sensitiveness became normal, and she was surprised to learn that she could no longer endure the hot water.

The mechanism of psychogenesis of a healthy or unhealthy psychic status would be unintelligible if there were not a chain of causal factors demonstrated, simply because a knowledge of the causes or determinants of a problem make it intelligible. To explain that an individual collapsed under strain because he was constitutionally weak would be about as scientific and satisfactory as stating to a scientific construction engineer that the house fell because the foundations were faulty.

Too little attention has been given by current psychiatry to the possibility of a summation of environmental crises, vulnerable physiological states, the over-development and fixation of fundamental desires upon unattainable objects during the early periods



of the individual's growth, and to the laws and processes of fixation of such insufficient adjustments. We see clearly the greater demand for knowledge of the mechanism of physiological shock as the result of emotional stress, and the psychology of developing emotional states and environmental situations which are conducive to shock and for studies of expression, defensive and compensatory mechanisms in man and in comparative psychology.

Sherrington's studies of the integrative functions of the nervous system bear out remarkably the manifestations of certain psychic functions as understood from their analysis. In his studies of the receptors, effectors and common paths, he demonstrated their highly important dual nature in that they always reacted positively for certain stimuli, but at the same time negatively refused to accept other stimuli. He, also, found that like reflexes may use a common path at the same time by reinforcing one another, and that unlike reflexes can only have successive but not simultaneous use of the common path; and he makes the plausible suggestion of obvious importance to psychology, "that the alliance of like reflexes and interference of unlike reflexes in their action upon their common paths seem to lie at the very root of the great psychical process of attention."<sup>\*</sup> Singleness of function and alliance of like reactions of effectors produce coordination.

Now in the psychic process of attention, for example, as demonstrated in the following control association test, all diverting associations are inhibited and the attention coordination is fixed upon the object of the test to give a reaction word of a special type to a stimulus word in the quickest possible time. The "set of mind" for the test is open or "positive" for the proper reaction word and "negative" for all others. In this instance the "negative" inhibiting functions were not quite sufficient to repress infringing reflexes, antagonistic to the set of mind, which has been aroused by the peculiar nature of the stimulus word, hence momentary incoordination resulted until a suitable reaction word was found. The repression of the psychomotor trend, the desire to explain, delayed the time and caused a perceptible internal discomfort, which disappeared after the discharge was permitted, in this case through speech, as the explanation was spontaneously made.

<sup>\*</sup> Sherrington: Integrative Actions of the Nervous System (p. 234).

A young lady was the subject of a controlled association test in which the stimuli were a series of verbs requiring a series of suitable objects for reaction words. The subject was asked to fix her attention upon the test; distracting influences were eliminated from the environment, thereby enabling her to control the content of her consciousness both by inhibiting diverting associations and also to concentrate upon the object of the test. Eagerness to react quickly was stimulated by performing the test as part of an efficiency contest. This dual nature of the function of coordination and concentration was illustrated by what occurred:

Stimulus.	Reaction Words.	Time.
Scold .....	Person .....	2.4
Win .....	Battle .....	5.8
Answer .....	Question .....	1.2
Weave .....	Basket .....	1.6
Wink .....	Eye .....	1.0
Mend .....	Dress .....	1.8
Pump .....	Water .....	1.2
Learn .....	Lesson .....	1.4
Open .....	Window .....	1.0
Eat .....	Bread .....	1.8
Climb .....	Ladder .....	1.2
Lend .....	Money .....	2.0
Smoke .....	Cigar .....	1.4
Singe .....	Hair .....	2.0
Dig .....	Hole .....	2.0
Read .....	Book .....	1.0
Tear .....	Dress .....	1.0
Throw .....	Ball .....	1.0
Sift .....	Flour .....	1.0

The word *win* brought up a *visual* image of a valentine and a phrase about "winning heart." The subject said she did not wish to say heart because it sounded silly. The word "heart" was, therefore suppressed, and the word "battle" was substituted. The effect of this confusion and defensive substitution continued to show itself in the next 13 reactions; it prolonged the reaction time. Then the subject spontaneously "confessed" *her conflict*, so that she might better concentrate. For the next four words her reaction time was very much reduced. This phenomenon showed conflict, repression, substitution, overlapping and expression for relief, through speech, of the feelings pertaining to the

"silly" word and reestablishment of the normal coordination for further reactions.

It seems to be a universal biological principle that to fix the position of an organ, or regulate its functions, it is necessary to have forces opposing one another, the resultant of which constitutes the functional state. We see this in the extensor and flexor muscles controlling a joint, the vasoconstrictors and dilators controlling the lumen of a blood vessel or intestine, and pressor and depressor nerves controlling the functions of a gland or the heart. This occurs also in antagonistic and allied reflexes. Reciprocal inhibition is the refinement of this principle, which we also meet with in the psychic functions, and the phenomenon occurs between active and passive forces. In the psychic function of knowing or identifying or selecting, a dual process is followed; one, the positive, usually is conscious; the negative is usually subconscious, but one can become fully aware of it readily enough. We know a thing by what it is like and what it is not like. In logic the affirmative implies a negative. When two individuals try to correct a negative determinant, an idea of what a thing "is not" into a positive determinant, an idea of what a thing "is" usually starts a verbal conflict or argument. When one is in a dilemma, or tries to solve a puzzle, one is conscious of the number of possibilities, any one of which cannot be selected for purposive movement as the one desired (the positive) until the others are inhibited or repressed as the ones not desired. We conclusively identify "why," "what," or "how" a thing "is" by identifying "why," "what," or "how" a thing "is not." The reverse function also is used. All objective knowledge is essentially comparative, which essentially implies also that it is discriminative at the same time. One complements the other. Sherrington has induced from his experiments the law that "At any single phase of the creature's reaction a simultaneous combination of reflexes is in existence. In this combination (1) *the positive element*, namely the final common paths, exhibit a harmonious discharge directed by the dominant reflex arc, and reinforced by a number of arcs in alliance with it. . . . But there is also a (2) *negative element* in this simultaneous combination of reflexes. *The reflex not only takes possession of certain final common paths and discharges nervous impulses down them, but it takes possession of the final common path*

*whose muscles would oppose those into which it is discharging impulses, and checks (inhibits) their nervous discharge responsive to other reflexes. This negative part of the field of influence of the reflex is more difficult to see, but it is as important as the positive to which it is indeed complementary.*"<sup>4</sup> (The italics are mine.)

He states further that "Each instance of convergence of two or more afferent neurones upon a third, which in regard to them is efferent, affords an opportunity for coalition or interference of their actions, each structure at which it occurs is *a mechanism for coordination*" (p. 145). It is at these points of convergence that disorders or conflicts are apt to betray themselves.

If one assumes that the afferent neurones converging upon a third are the forces that determine the behavior of the efferent neurone, one finds the same phenomenon in psychic processes and it is these points of juncture which often betray imperfect control of the reaction. For example, in a case of error of my own, which I take the liberty to use because of its suitable nature for this discussion. I was stopping at a health and recreation resort, where an odious mineral water is depended upon as the chief remedy for reclaiming health. I wished to send a postal card of the hotel to a friend, but I did not know how to spell the name. I was thoroughly disgusted and out of patience with myself, because of being again inconvenienced by a chronic failing. I determined to write any way, and excused myself with the compromise that I would apologize later to my friend for my miserable spelling. I then wrote a note on the card about what could be done with several carloads of magnesium sulphate and hideous s(m)elling spring water. After I had finished it I read it over, and was surprised to find that I had written about what could be done with several carloads of magnesium sulphate and hideous s(p)elling spring water. My repressed feelings of disgust for my spelling, and the wish to apologize for it were given an outlet through my error of unconsciously substituting the letter (p) for the letter (m).

In this instance the repressed feelings of disgust, the deferred wish to explain, and the wish to write a card, determined my

<sup>4</sup> Sherrington: Integrative Actions of the Nervous System (p. 178).

incoordination and error, the manifold determinants were condensed for expression by fusing the words smelling and spelling. This all occurred without my being conscious of it. Where the repressed negative determinants and the complementary positive determinants cannot adjust themselves for reasons to be obtained by the analysis, we meet with the phenomenon of fixation, which may become so firm as to be seemingly unchangeable, and may have a serious influence upon the evolution of a personality. The unconscious determinants may be manifold and almost as intricately associated as overt ideas may become. Their fixations may be further associated with a nucleus of repressions and deferred wishes formed in childhood, as in the following case of hysteria :

A man of 27 years was admitted to the hospital to be treated for a sore knee. For the past 14 months he had been walking with crutches, which he made for himself. In August, 1909 (at the age of 23), he had the first period of soreness of the knee, lasting three months, and in June, 1910 (24), a second period of soreness lasting three weeks. In August, 1912 (26), the present difficulty began. On inspection, both knees appeared to be the same, except for a general atrophy of the soft parts on the lateral side of the left knee, as well as a very marked atrophy of the muscles above and below the knee. The patient walked with his crutches, and made no attempt to bear weight on the left leg. This seemed to be merely on account of *the fear* that he would hurt the knee, and not because it was painful. As the patient flexed or extended the leg nothing abnormal was felt in the joints, no tenderness on palpation; sensation was normal. X-ray examination was negative. The physical status otherwise was negative, except for some constriction of the visual fields. The family history was negative. The patient has five brothers and two sisters, who are healthy. He had the usual diseases of childhood, with no after effects. He attended school successfully until 17, then worked in his father's workshop for two years. He had always been a very religious boy. At 20 he entered college. At 21 he developed a facial paralysis of an apparently functional type.

The patient was a student at college, and on police duty at one of their football games. He became involved in a clash of words with a trespasser, in which he seemed to have suffered some humiliation. A review of the emotional conflict is given about as the patient discussed it. The quarrel, he says, made him compare himself with his antagonist. He felt superior to the man, but thought that his masturbation had weakened him physically, and that the man showed his inferiority openly, while he kept his own inferiority (personal weakness related to masturbation) concealed. He felt that he should show his wrongs openly, and wished to tell a friend, but had been afraid to confide in any one, because he did not wish to lose his social standing. The feeling that he would like to tell some one became so strong

that he could not suppress it. During the game, and during this state of emotional conflict, one of the players was knocked unconscious. The patient was impressed by the open, upturned, eyes and expressionless face, which to him meant honorable defeat.

That evening he noticed that he could not close his eyes; he recalled rubbing his face, but could not tell whether it was paralyzed or not. The next morning he noticed he could not laugh when the students in the class room laughed, and he thought his face was swollen. Then he consulted a physician, who did not detect anything wrong about the facial condition. That afternoon he could not move his facial muscles, and consulted a specialist. He was advised to remain in school, and given electrical treatment. After four weeks he quit school. The right side of the face began improving in a week or so. The left side required about eight weeks to recover. The patient interpreted his conflict as follows:

His "second mind" (the patient's terminology) wished to lay open his weakness as an explanation for his defeat, but his "outer mind" (also patient's terminology) would not permit this because he was afraid of ridicule, and his two minds compromised on the way of showing the defeat, which the unconscious football player showed. The conflict seemed to include at least two important determinants; one of shame and self-depreciation because of his masturbation and defeat, which desired expression, and another the desire to preserve his social standing and fears of ridicule which inhibited this expression.

In January, 1908, his father injured his knee, and had to be confined in a hospital for seven weeks. In August, 1909, the first knee episode occurred. The patient had been working on his knees, laying flooring. For a day or two he had been afraid he might get a sore knee like his father's. Then his knee developed peculiar feelings and "wanted to stay in a bent position," and finally could not be used. For 10 weeks his physician treated him with iodine. He gradually became able to walk, then he used a cane. Then the knee became quite normal again until June, 1910, when he bent it accidentally "further than it had ever been bent before since the previous illness." This second period of soreness lasted three weeks.

He then improved, and had no further difficulty until August, 1912, when he dropped a three-pound piece of iron on his knee. He had pain for a brief time but this disappeared. A few days later the knee felt sore, and since then for the past 14 months he had either been in bed or used crutches to walk.

The patient maintained a most striking mental attitude of serenity, almost sanctified calmness. He gave one the impression of being deeply pleased with his difficulty, and said he felt that God wanted him to suffer for his sins.

He had been in the surgical service of the hospital about three weeks, and had no doubt been impressed by the thorough physical examinations and negative diagnosis. Repeated enforced suggestions that he could walk were responded to with but little effort and much complaint of the great difficulty. After a second complete mental and physical examination

had been made the case was discussed with the patient. Great emphasis was laid on his negative physical state, and that the cause was an emotional one was insisted upon. Then he was advised to talk frankly, and retain no feelings about the matter. He replied with little hesitation that he was worried about his masturbation; that he had continued it since 11 or 12 years of age. With more resistance and circumlocution, he told that the objects of his fancies were his neighbors, sisters, and finally, after some hesitation, his mother; that his affections were "filthy" because they were so associated with his mother; that he had been impressed with his mother's care of his father during his illness, and that during his own illness she was unusually solicitous of him. He said that he must suffer for his sins in this world, or the next. When asked if he cared to explain why the left knee had been affected instead of the right, he replied he believed that it might be because his heart was the seat of his affections, and it was on the left side; that he had a left-sided varicocele, which he believed was caused by masturbation (manifold determination).

The sore knee formed an adequate avenue of expression for manifold idea-emotional determinants, of the nature of self-censorship and remorse because of masturbation, and it was also a means of religious compensation, when he believed that God wanted him to suffer for his sins. Further, he successfully imitated his father, and solicited his mother's affections. After a thorough digest of his difficulties the patient walked back to his bed without crutches, which he practically had not been able to do for 14 months. His attempt was however accompanied with tremendous expression of loud breathing and facial distortion, as if in pain. He afterwards stated that he felt no pain at the time, but could not help his struggle. With encouragement, he rapidly recovered the use of his legs, despite the marked muscular atrophy and plantar sensitiveness from disuse, and without any special treatment.

A review of the case shows that a series of conflicting feelings were very active in the patient, and dominated the remainder of his personality. They may be grouped under positive and negative determinants (the feelings trying to express themselves and the feelings trying to prevent it). The acuteness of the untenable conflict was reduced when it could be suppressed from consciousness. To effect this, however, his attention was fixed upon the knee as an adequate somatic substitution, which latter appeared to have been adequately determined by the impressions produced by the father's illness; and through this mechanism a type of amnesia for the real conflict was established which was valuable to the patient.

The patient did not consciously select this solution, but it seems to have occurred in a manner which is more like reflex action than anything else. This type of evasion and expression and repression of feelings seem quite common enough in the normal, but that it should occur so persistently and flagrantly is pathological. The patient was made aware of his tendency, and asked if he could explain its persistence. To my surprise, he readily replied that this manner of reacting to such situations was influenced greatly by an episode of childhood immorality, when his older sisters played

with him; played at being married, and then induced him to play at having intercourse. The whole mechanism was not volitional, but a type of reflex action involving both the instinctive and emotional systems of reflex adaption.

*Conclusion.*—The present day opposition of many students of behavior and mental diseases to a psychogenetic interpretation and formulation of the causes of abnormal behavior is not excused by the failure of the older organic or metabolic conceptions. The new methods are in perfect harmony with critical studies of the functions of the nervous system and the mind. Merely descriptive studies of behavior can never be sufficient or helpful for therapy or understanding of processes. We need dynamic conceptions, formulations, and methods which yield a practical psychological and physiological analysis and applicability.





## THE MODERN TREATMENT OF INEBRIETY.

By IRWIN H. NEFF, M. D., FOXBOROUGH, MASSACHUSETTS.

The modern conception of habitual drunkenness demands that there be developed a practical method of handling such cases. Any system proposed which is put into practice must be sufficiently elastic so as to permit of its universal adoption.

State care is preferable and a centralization of authority is essential. The carrying out of the purposes of any plan should be authorized and controlled by the medical profession. All the details of such a plan, both preventive and curative, should be censured by medical experts before submission to the public for approval and adoption.

Any institution built for the care and treatment of drunkenness should be constructed so as to meet the selective requirements of these people; it should also allow for regional departments directed by the parent institution, which should be considered the administrative head.

In order to be effective, any legislation which is enacted for the amelioration of an evil must be supported and upheld by public opinion. Heretofore, owing to the absence of reliable data and lack of co-operation, the many isolated attempts which have been put forward to solve the problem of drunkenness, have met with little or no success. It has been said with considerable truth that there is much to fear from excess in drinking, but there is also much to fear from excessive statements which experience soon discovers to be unsupported by facts. Recently the correlation of scientific facts and the co-operation of allied interests have produced satisfactory working capital which can readily serve as a basis for the inauguration of a uniform method of combatting this condition. The reasons for the universal demand for a plan which will modify or control habitual drunkenness may be said to be two: first, the sentimental reason, namely, a realization of the fact that the public owes to humanity a debt which is considerably overdue; secondly, the economic reason, namely, a realization that

chronic drunkenness is a destroyer of efficiency and is so related to poverty, crime, insanity, social decadence and physical disease, that any method advanced for the improvement of conditions will not only check human waste and disease, but will necessarily lessen the expenditures fostered upon a community entailed in the care of the victims of drunkenness and their dependants.

That there is a need for a uniform and practical method for caring for cases of habitual drunkenness is clearly shown by a review of the laws on the statute books relative to the regulation of the liquor interests. The numerous requests for more stringent legislation is additional proof that we realize that we are in need of state laws which will more completely protect humanity from the evils resulting from the abuse of alcohol. A careful review of the many laws enacted in different states for the regulation of the sale of alcoholic beverages convinces us that the great mass of legislation was not proposed for the abolition of a personal privilege, namely, prohibition of what many consider a constitutional right, but for the purpose of controlling drunkenness, a condition coming from the abuse of an agent which is capable of producing intoxication, disease and economic waste. The question before us when we deal with the inebriate is not one of state or world-wide prohibition, but one more clearly of the education of the individual to his relation to a substance deleterious to him; in other words, the relation is that of the physician to the patient. It must be remembered that the following remarks refer to the inebriate and do not refer to the chronic alcoholic or to the persistent social drinker. When we consider the inebriate we must remember that we are dealing with an individual who has a distinctive constitutional peculiarity, in that the habit of drinking is engrafted on a weakness.

R. W. Branthwaite of England clearly expressed this condition when he said that "this constitutional peculiarity may be acquired by long-continued indulgence, but it is more properly inherited as a diathesis in most cases, remaining latent or becoming evident according to circumstances or environment." When this constitutional predisposition or fault or diathesis, or whatever we may call it, is present, it is permanent. Doubtless some people who abstain from the use of alcohol possess it unknowingly, other persons who take alcohol realize its existence and spend their

lives battling against the weakness; some succeed while others fail. If an inebriate becomes a sober individual the peculiarity back of the habit which we call drunkenness still remains a factor to be reckoned with during the whole life of the individual.

Disregarding for our present purposes our personal opinions on "the alcohol question," we must acknowledge the need for a more complete and consistent plan for the bettering of a condition which is one of the nation's greatest handicaps. The medical profession has been singularly lacking in an appreciation of the fact that the problem of the amelioration of this condition is within its province; indeed, it is only within the past few years that sufficient detailed and scientific study has aroused the public to the necessity of co-operating with physicians in an effort to overcome a social evil which is progressively increasing.

Sociologists, philanthropists and jurists have for years struggled with the question and have failed to arrive at any satisfactory solution. The physician has made feeble and half-hearted efforts to substantiate his ideas, and the resulting conflict of opinion has only served to demonstrate the inefficiency of the many methods of caring for the habitual drinker. It must be said to our discredit that the neglect of the medical man to properly appreciate this question is in great part responsible for the futile and many-sided efforts which have been made by different interests to cure or control drunkenness. One of the greatest difficulties which the medical man has to overcome is the need of convincing the public that the many alleged "cures" for drunkenness now existing are not countenanced by the medical profession, but are the product of a successful system of quackery which has flourished profitably for years.

Assured of the co-operation of the public and taxpayer, any state can now proceed, under medical supervision, to develop an organization which will squarely meet this problem, for the study of drunkenness is clearly a medical-social study which should be supervised and controlled by the medical profession.

For the past six years Massachusetts has given considerable study to the problem of drunkenness. During this time two special commissions have prepared and submitted legislative reports, which have resulted in legislation enabling the commonwealth to make a substantial start in putting into practice the

recommendations made by these commissions. An analysis of the several reports shows many things in common and demonstrates particularly that any plan inaugurated by the state for the solution of the problem should be approached from two vantage points. Any system proposed must be met from a preventive and curative side by the adoption of a uniform plan with centralized control. Both reports referred to are emphatic in declaring that the method which has existed from early times of committing persons to penal institutions for drunkenness is wrong in principle and should be abandoned. Moreover the commissioners agree as to the need of state non-punitive control for the care and treatment of habitual drunkenness.

The treatment and care of the inebriate does not call for institutional treatment alone, but demands a more widespread policy which includes a consideration of the personal equation and opportunity for developing a system which will allow for differentiation, segregation and individualization. We can therefore consider the proper handling of this class of individuals from two points of view; first, the institutional department; secondly, the non-institutional or out-patient department.

Recognizing that the inebriate requires specialized care and treatment, an institution built for inebriates must be built around the individual, and must be so constructed as to administer to the varied types of inebriety and also allow for the development of the different departments. Briefly expressed the requirements for the proper constructive treatment of the inebriate are as follows:

- (A) Sufficient land for agricultural development.
- (B) Sufficient land for industrial training and work shops.
- (C) An opportunity for segregation of the types.

To meet these requirements a large tract of land, certainly not less than one thousand acres, should be available. This land should be adaptable, lending itself readily to outdoor employment and diversion for the patients. Massachusetts has committed herself to the colony system of caring for these people, the cottages being grouped in colonies. A number of these cottages have already been built and are occupied by patients. In order to permit of segregation and individualization these groups of cottages or colonies are suitably situated and distributed over the large

tract of land. The size of the cottages, the unit of the system, is governed by the type of case to be cared for in each colony. The maximum number accommodated in any cottage is twenty-five. In addition to these colonies with their respective homes and farms, a group of buildings has been erected which serves as an administrative and receiving group. These service buildings are conveniently located so as to permit of an economic management. Further extension of the hospital will consist of additional cottages which will be built at the different colonies. The colonies, briefly expressed, are as follows:

- (1) A colony for incipient, or hopeful, inebriate cases.
- (2) A colony for more advanced male cases, supposedly men who are in need of custodial care.
- (3) A colony for refractory male cases; men who do not lend themselves to ordinary methods of treatment, and who require more or less restraint.
- (4) A colony for inebriate women.

It is at once apparent that the essential part of such a grouping is the cottage or unit, which must be so situated and constructed that it will readily lend itself to the needs of the patient groups.

#### NON-INSTITUTIONAL OR OUT-PATIENT DEPARTMENT.

The need of this department is evident and can be met by the establishment of an out-patient office which should be situated in a metropolitan area and not too remote from the parent institution. This department is an integral part of the hospital. Its purpose may be defined as follows:

- (a) A preliminary examination of the prospective patient for the purpose of differentiation.
- (b) Visits to patients while at the hospital.
- (c) Visits to the homes of patients before their discharge from the hospital.
- (d) Visits to patients after their discharge from the hospital.

This department is in charge of a physician; home visitations and the vocational bureau are supervised by agents who are responsible to the departmental physician. The department is conducted by the state as a permanent central office, which serves as a center for all out-patient work.

The scheme as developed by the Massachusetts system and which

is now in part in active operation can be graphically presented as follows:

(1) A state hospital for inebriates developed on the colony plan, with a sufficiently ample and flexible equipment for the different types and grades of cases of habitual drunkenness.

(2) An out-patient department, with broad and well-defined duties.

(3) Detention hospitals serving as adjunct institutions to the central hospital. These hospitals are to be situated in the cities and towns of the commonwealth. The hospital need not be especially built for the purpose, but should have special features for the care and treatment of cases of acute alcoholism. Briefly defined, the purposes of these hospitals would be as follows:

(a) For the treatment of delirium tremens.

(b) To serve as an observation and receiving ward for the parent hospital.

(c) To provide a clinic for incipient cases of inebriety.

(d) To serve as sub-offices for the out-patient department of the main hospital.

(e) To provide medical officers to visit prisons to examine cases arrested for drunkenness and to determine their fitness for treatment at the hospital.

It must be acknowledged that Massachusetts, with its excellent probation system co-operating with the hospital and its state farm allowing for the detention of the criminal inebriate, is well equipped for the state care of drunkenness as above outlined.

The proposition as above described is elastic and can be modified so that its purposes can be carried out by any state or municipality. All the departments above enumerated should be under uniform management, with trained medical specialists and centralized control. The essential feature of this method is that the patients realize that they are receiving consistent treatment afforded by the hospital, and that they respond to it in ways that they do not respond to the diversified management of the asylum, jails, reformatories and almshouses under which in succession they now pass.

It is believed that the system as above outlined affords distinct advantages for the solving of the complex problems associated with drunkenness. There can be no doubt that the adoption of

such a method under state control would not only result in economies to the state, but would contribute to the sciences of medicine, psychology and sociology new and important data on the problem of drunkenness.

I feel that this brief description of the plan to which Massachusetts has committed herself would be incomplete if I omitted a description of our method of medical treatment of inebriates.

Hospital treatment for male inebriates has been provided by Massachusetts at the Foxborough State Hospital for twenty-two years. Until recently all cases were committed from municipal, district or police courts (except in Suffolk and Nantucket counties, where they are committed from probate courts) upon certification of two physicians that the man is "subject to dipsomania or inebriety either in public or in private or . . . is so addicted to the intemperate use of narcotics or stimulants as to have lost the power of self-control," and "is not of bad repute or of bad character apart from (his) habits of intemperance." Since the reorganization of the hospital in 1907 provision has also been made for the admission of voluntary cases (Acts of 1909, Chapter 504) either directly or from the criminal courts, as one of the terms of probation. During the year ending November 30, 1913, the number of cases received by commitment was 171; the number of voluntary cases received was 577.

The curative methods of dealing with inebriety now employed at the Foxborough State Hospital consist in special individual treatment to build up the body, mind and character of each patient. A detailed physical examination is made of each person received, and all diseases or defects which are noted receive appropriate medical treatment. The bodily health is built up by means of nourishing food, out-of-door work and by supervised exercises. Good physical health is the foundation upon which cure of habitual drunkenness must be built. It is, however, only one of the conditions of cure. Work and rest are so arranged as to habituate the patient to regularity, for inebriates are characteristically persons of irregular habits, and the creation of order in their lives serves to reduce temptation and to provide the basis of moral living.

Study of the mental condition of the patient supplements the physical examination, and the causes of his inebriety, both indi-



vidual and social, are sought. Successful curative treatment of inebriety is not medical in any narrow sense, but is mental. There is no known specific. "Cures" are accomplished through suggestion, not by drugs. A type of work is chosen for each patient which will be congenial to him and will prepare him to enter some steady employment upon discharge. Latent abilities and interests of the patient are sought out and developed in so far as possible, not only in his work, but in his leisure hours.

The essential element of hospital treatment of inebriety is, however, not the building of healthy bodies and regular habits; not the industrial or other training, for the well-conducted prison can furnish these. The hospital alone, of all state institutions, can provide those elements of suggestion and moral suasion which constitute a large part of psychotherapy. The co-operation of the patient is an essential condition of success in treatment by mental suggestion; this co-operation cannot readily be elicited in the prison where discipline and restraint tend to arouse an attitude of antagonism or resentment on the part of the inmates towards officials. Clearly those patients who come to the hospital voluntarily for cure (whether they come directly or are sent by a judge or probation officer as one of the terms of probation, or procure their own commitment under Chapter 504, Acts of 1909) are more likely to co-operate and to be benefitted than are persons who are committed to the hospital against their will. The physician, by means of repeated suggestion made under favorable conditions, persuades the patient of the danger to himself and to others of his habit of intoxication; of the necessity of complete abstinence from the use of all liquors; of the success that can be achieved through careful work and regular habits. Special suggestion is made to each patient on the basis of his peculiarities, to quell his special weaknesses, to develop his ambition, re-develop his self-respect and supply new interests. No two cases are precisely alike, nor can they be successfully treated by any stereotyped plan. Diagnosis by a physician of specialized training in nervous and mental diseases, and continuous suggestive treatment under his direction, adapted at every point to the physical and mental needs of the patient, are essential to cure.

The curative treatment of the patient is continued after his discharge from the hospital through the out-patient department.

Prior to the establishment of this department in 1909 the discharged patient often had to return to an environment that was unfavorable to his new resolve of abstinence, to unemployment, to drinking friends, or to a comfortless home. Discouragement from these sources, if unrelieved, will in some cases reduce health and, through counter suggestion, overturn the treatment of the hospital. To tide the patient over this crucial transition period the Foxborough State Hospital has appointed a special out-patient physician, who becomes acquainted with each case while it is at the hospital and with the patient's family. Before the discharge the family is shown how they can co-operate in perfecting the cure. Work is found for the patient before his release. He is associated with local persons or social clubs or religious organizations that will look after him and provide temperate friends and wholesome amusement. By frequent visits to the hospital and visits from the out-patient physician the suggestion made at the hospital is reiterated until years of continuous abstinence prove that further oversight is no longer needed.



## APPLIED EUGENICS.

By SANGER BROWN, M. D., CHICAGO.

Eugenics is by no means a strictly medical subject. The physician's special relation to it is due to the fact that observation of the laws of heredity comes peculiarly within the range of his professional activities; his daily work affords him a highly favorable opportunity of witnessing, in one form or another, the deplorable evils entailed by tainted or defective parentage; hence it is only natural that he should be found among the foremost to seek a remedy for them. If it is conceded that physicians in general, by virtue of their vocation, are better qualified than any other class to estimate the practical significance of the laws of heredity as they affect individuals, then the members of this association, by reason of their special practice, are pre-eminently qualified to speak with authority on the subject. It is certainly within the province of the physician, and possibly one of his many public duties, to elucidate as clearly as he can the laws of hereditary transmission, but after he has done this, the particular use society shall make of his contribution is no more a concern of his than of other citizens.

Applied or practical eugenics may be defined as the regulation of reproduction in accordance with the laws of heredity, with the aim of thereby evolving a superior race. To this end two plans of procedure suggest themselves, constructive and restrictive. Constructive methods, by making a scientific selection of parents, would propose to evolve directly a specified progeny; while restrictive or preventive measures would seek to improve the offspring indirectly, by limiting or preventing propagation of the unfit.

Since it is a matter of common observation that visible bodily characteristics are frequently hereditary to a striking degree, it is no less reasonable to suppose that the special structure of the brain favorable to the achievement of individual prominence may be inherited than may be that which determines liability to such

diseases as epilepsy or insanity for instance. However, it is probable no one at the present time would seriously engage to produce a potential prodigy if given ever so much latitude in the selection of parents. Indeed to assume that such a result could be attained with anything like scientific accuracy would be to open a broad and fertile field for the exercise of humorous speculation. Whereas a material diminution in the frequency of the above-mentioned maladies would certainly ensue, if the victims of them did not participate in propagation. Thus, the wide discrepancy between the degrees of confidence with which the result can be predicted in the two cases supplies a satisfactory explanation of the reason why those actively interested in the subject of eugenics have directed their energies to the problem of discovering some way of utilizing restrictive rather than constructive principles.

Society is severely shocked from time to time as reports are published setting forth the steady proportionate increase in the number of those individuals who, through disease, delinquency or congenital defect, have become state charges; and though students of the subject differ somewhat as to the causes of this alarming augmentation, all agree that the part played by heredity is enormous. Furthermore, a free circulation of case histories—either exaggerated or truthful, but bad enough at best—describing the horrors of hereditary disease, frequently excites grave apprehension in the mind of the person reading them, lest he himself should become a victim of it or transmit a tendency thereto to his children. Therefore both from an economic and a personal point of view, contemplation of the distressing conditions just alluded to supplies a rational motive for the energy which is being put forth with a purpose of effecting sensible amelioration of them.

For the purpose of limiting propagation of the unfit, two methods have been proposed and to some extent experimented with. These are in substance: Prenuptial medical certification of fitness to marry, and sterilization of the unfit. Legislative support has been proposed for each, but so far neither proposition has met with the success which its advocates had hoped for.

To discuss the former plan more in detail, it proposes to prevent or limit propagation of the unfit, by requiring every one, as a preliminary to marriage, to procure a certificate of fitness determined by medical examination. In their eagerness to secure the im-

mediate inauguration of this remedy, however, its proponents have apparently failed to give due consideration to some of the fundamental principles which govern the effectiveness of legislation. Neither would it appear that the possible secondary or remote results of their proposed remedy had been duly anticipated.

It is generally conceded that a new law which requires a radical change in an established custom or practice cannot be successfully enforced unless those whom it is intended to benefit are able to comprehend and appreciate its advantages; therefore, since under the most favorable circumstances it must be some generations hence before the population in general could be expected to understand the laws of heredity as they are at present understood by physicians, the enactment at the present time of such legislation as above alluded to is at least premature. And in this connection the question may be asked: Is it probable at the present time that any legislation whatever could be enacted which would have the effect of inducing or compelling physicians to make any further concessions to the doctrine of eugenics than they already make? The exercise of full freedom in choosing a husband or wife, or in reaching a decision as to whether the holy estate of wedlock shall be entered at all or not, has long been cherished as a precious prerogative of civilized man. And marriage itself, older than civilization, providing for the natural gratification of the passions associated with the generative instincts, and resulting in the establishment of the home, certainly constitutes an essential element of the foundation upon which our present social structure has been raised. Indeed, it is so closely interwoven with other fundamental factors of the social fabric, such as religion, morality, patriotism, and economics, that any proposed alteration of the institution whatever which might bring about a material decline in the marriage rate deserves the most serious and careful consideration. Logically, therefore, before presuming to advocate the enactment of such a law, its proponents should have made a thorough survey of the whole field of sociology in order to determine to what extent, if any, the terms of their proposition conflict with the action of the various forces which have been most potent in directing social evolution. Few forms of enthusiasm, however, are conducive to patient study and judicious delibera-

tion ; processes indispensable to the development of sound legislation.

The sublimity of purpose which prompts the eugenic enthusiast to attempt immediate correction of an apparently grave social error may in some degree excuse his precipitancy ; it cannot, however, warrant approval of rash remedial measures or contravene the inevitable disappointment which must attend efforts to enforce them.

It is pertinent to note in this connection that for the enactment of hasty, ill-advised, ineffective, and redundant legislation, our own country affords a conspicuous example. The attempted enforcement of such legalized authority is more likely to disturb or aggravate the conditions it was intended to improve than to correct them ; the disorder so set in motion may spread in such a way as to demonstrate the essential interrelationship existing between various sociologic conventions hitherto regarded as quite distinct and independent of one another. And, furthermore, since the advocates of summary legislation in common with others manifesting a lively interest in the subject of eugenics have for the most part reached an age when the force of passion has sensibly subsided, they may be urging the enforcement of regulations to which they themselves would not have submitted in their youth. In fact, at no period of his life is ready submission to constituted authority a conspicuous attribute of the temperamental reformer.

Should society sanction sterilization of the unfit as a condition of their marriage?

Certainly, both from the standpoint of race betterment and that of economics, society would gain much and lose little if the effect of approving the practice of specific sterilization could be limited to the unfit.

Possession of all available knowledge of the laws of heredity, however, coupled with the most exalted purpose of fair dealing would not enable one to draw a hard and fast line separating the fit from the unfit. There must always remain, under any circumstances, a considerable number of individuals in reference to whose proper classification more or less doubt would exist. Thus, owing to the element of uncertainty inherent in the situation, unprincipled members of our profession, prompted by cupidity, would be en-

couraged to pronounce every one unfit who might apply to them for a sterilizing operation. And women who regard child-bearing as a burden put upon them by an unfair dispensation of nature—and there are many such—would be encouraged to make a false pretence of unfitness in order to secure what they would designate the advantage of sterility. No doubt these objections might be met to some extent by requiring the candidate for operation and perhaps the operator as well, to furnish a certificate in each case, from a duly appointed board authorized to pass judgment on the question of fitness. Without, however, speculating as to the probable extent to which the services of such a body might be sought, or attempting to point out the difficulties which might confront them in the exercise of their defined duties, it may be confidently asserted that public sanction under almost any circumstances of a specific sterilizing operation might be construed by unscrupulous surgeons, and those wishing to shirk the duties of parenthood, as in some measure supplying an excuse for their delinquencies.

The question of the birth rate is so intimately related to the subject of applied eugenics at certain points that the latter in some of its aspects cannot be discussed without reference to the former. And it may be stated in this connection that students of economics are from time to time expressing grave concern as they scrutinize the curve of relative depression, which the birth rate in this country is describing. This they attribute largely to limitation of child-bearing among educated women; hence any proposition which carries with it the probability of still further diminishing reproduction of the fit, if it can be entertained at all, must present some very great and obvious advantages. While it would be well nigh impossible to determine by exact methods the consequence of giving the proposed procedure the force of legal endorsement, it might well be doubted if the injury society would sustain by adopting such a course would not far outweigh the benefits which it might thereby secure. It is only fair to state before leaving this branch of the subject that, since husband and wife are for the most part agreed on the matter of family limitations, responsibility for a falling birth rate is divided between them.

Should habitual criminals or criminals by defect be encouraged, by mitigation of sentence, to submit to a specific sterilizing operation?



This latter proposition is quite free from some, if not practically all, of the objections raised against the former. That it sanctions a specific sterilization operation is true; the peculiar conditions, however, under which this approval is given would tend to reduce its demoralizing effect to a minimum. For since candidates would be selected by established court procedure only, no encouragement would be offered unprincipled practitioners for the exercise of venal or selfish motives. And although the number thus operated on might be very small, improvement in our race would vary directly with the frequency of the operation.

Should any one under any circumstances whatever be compelled to submit to a specific sterilizing operation?

To answer this question in the affirmative would be to ignore one of the most widely respected fundamental principles of the doctrine of personal liberty. Present limitation of time obviously prohibits a critical discussion of the soundness of this doctrine, nevertheless it may be casually observed that its universal recognition in civilized countries and the concessions long made to it, support the prediction that proposed modification of it, such as that implied by the immediate question under consideration, would meet with determined opposition.

Recognizing the beneficent purpose which the doctrine of eugenics announces, my contention is that education, using the term in its broadest sense, constitutes the main, if not, indeed, the sole, resource upon which reliance must be placed for progress toward the desired end.

If it be maintained that more definite knowledge is required regarding the laws of heredity, before an attempt should be made to apply it to the problem of race betterment, then special departments of education must be depended upon to supply this. On the other hand if it be assumed that enough well-ascertained facts of the kind in question are already available, then the extent to which education succeeds, in impressing upon individuals the significance of these, will measure the legitimate relief or benefit which may be expected to accrue to society from their application. Movements, however, in the line of progress, which depend for their success upon education of the masses, though usually sound, are comparatively slow; much too slow, indeed, to appease the feelings of the temperamental reformer or agitator.

The practice of those religious orders which require a vow of perpetual celibacy or chastity as a condition of admission to them clearly demonstrates how far the sexual passions may be suppressed or compensated for by exercise of the will. Educational influences may be fairly reckoned as the essential factors which prompt and support renunciation in these cases. Furthermore, instances are not wanting in which individuals of intelligence and character, but with strong hereditary taint, have declined marriage from purely altruistic motives.

Since it has been intimated above that a tendency to shirk the duties of motherhood is peculiarly prevalent among educated women, the question might be asked at this point, if it is not a contradiction of terms to proclaim education as the chief agent to be depended upon to give effect to the doctrine of eugenics. Assuming the truthfulness of the charge against educated or more specifically college-bred women, for statistics upon which the accusation is founded have been furnished by them, it may be mentioned by way of explaining the apparent conflict of statement alluded to above that the delinquency of the women under consideration neither discredits education nor puts a premium on ignorance; it rather tends to prove that the various educational influences brought to bear on these individuals or students, perhaps from infancy to graduation, had not been adjusted with due regard to the importance of maternity.

If wide diffusion of specific education is conceded to be essential to the substantial progress of applied eugenics, then it is pertinent to inquire, What should be taught? How, when, and by whom? These are questions of such supreme sociologic importance that a comprehensive discussion of them might properly reach the dimensions of a volume. Under existing circumstances, however, nothing more can be attempted than to make a few relevant comments on them.

The assertion that all forms of religion seek to regulate conduct according to a scale of rewards and punishments is hardly open to controversy, and it is likewise a matter of common knowledge that the Christian church, more notably certain divisions of it, has achieved eminent success in securing among its members acceptance of the duties of parenthood. But if it be conceded that even in these cases a prospective increase in the family is fre-

quently regarded in the light of an added but inevitable responsibility, rather than as something ardently desired, then it may be safely said that the ranks of population in general are recruited more by an incidental than a planned progeny. This statement of the case, however, assuming it to be correct, is shocking to the sensibilities of the idealist who indulges visions of a period when, from civic considerations, parentage shall be universally recognized as an eminent privilege and a satisfactory birth rate maintained on that basis. Granting the high character of such an aim in common with that proposed by the doctrine of eugenics, the utmost caution should be exercised in the adoption of educational measures intended to promote the ends desired. Existing conditions should be carefully studied before condemning them. The direct and collateral influences which have contributed to their development and maintenance should be investigated. The immediate and remote results of a proposed radical change should be calculated for the purpose of learning how far they agree or conflict with established usage, for the practices so designated not infrequently meet all situations likely to arise much better than they might be expected to do from a superficial examination of them. Indeed, thorough analysis often shows that with only slight modification, or none at all, forms of conduct fixed by custom are those best suited to the needs of the community in which they prevail; to effect provisionally the best practical compromise is the essential problem, since some undesirable results are inevitable concomitants of each and every system whatever. The ambition to discover and point out a better way is certainly laudable; it would be deplorable, however, if in its exercise expedients should be advocated or adopted which might impair the wholesome effects of present methods without supplying compensatory advantages.

Ample sources of information are available to the mature who wish to study the subject of eugenics and cognate branches of science, but the question of disseminating education so widely that the masses shall understand the laws of heredity well enough to yield due submission to them in the interests of eugenics requires that the necessary instruction must be given during school age, not only because this is the period most favorable to the acquisition of impressions which mold character, but since the purpose of this specific teaching is to qualify the pupil to apply his

special knowledge in reference to marriage, he must be prepared to give this subject due consideration when it presents itself, which of course is essentially in early life.

As a general proposition, it will be conceded that the school is by far the most practical agency which may be depended on to insure a widespread diffusion of knowledge; however, since pupils naturally and properly discuss among themselves the topics taught them, it follows, logically, that a topic which should not be so discussed should not be given a place in the authorized list of subjects to be presented. Most people will agree that it is clearly undesirable to encourage discussion of sexual subjects among the young; hence if this is conceded, these subjects should not be presented as class exercises in the public schools. To impart to the young opportunely correct information on various aspects of sexuality is the province of parents and guardians. Such an intimate acquaintance with the temperament, tendencies, and perhaps critical experiences of the young person as a parent or guardian is in the best position to gain, is highly essential in reaching a decision as to the time, place, and nature of the required precepts. And furthermore, the gravity, privacy, and delicacy which naturally characterize these interviews between parent and child make due concession to the beautiful attribute of modesty, while at the same time they tend to strengthen the impression which it is their purpose to make.

It is hardly conceivable that any course of lectures on sexual topics, no matter how carefully prepared, could be presented to a school class as usually formed, without distinct injury to a considerable proportion of its members. Indeed the positive injury society would suffer from the adoption of such a course, would, in my opinion, vastly outweigh the harm resulting from omission, only too common, on the part of parents to fulfill their duty in these matters. Let correction proceed along the line of urging parents to seriously study and duly meet these important obligations; let us not, however, hastily and rudely molest our most precious and venerated possessions; rather let them be carefully reviewed and gently re-adjusted, if need be, to meet the march of genuine enlightenment.



## INSANITY IN CHILDREN.

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This presentation deals with mental disease in children exclusive of choreic, epileptic and hysterical insanities, juvenile paresis, syphilitic dementia, and the idiocies. Dementia precox is also excluded, as the cases to be referred to, in the main, concern children under 15 years of age.

At first sight insanity in children would appear to be a rare affection, indeed Hagen<sup>a</sup> stated that it occurs in one in every 72,752 inhabitants only. Ireland believed that it was so uncommon as to make it very difficult to generalize about it. But the study of the literature forces one soon to the conclusion that there is "nothing new under the sun" after all, for Coelius Aurelianus as long as 1400 years ago described mania in children. The earliest recorded case since then is that by Berkham<sup>b</sup> who in 1750 observed a case of melancholia in a girl of eleven. Greding<sup>c</sup> in 1790 also published a case of insane fury in an infant of 9 months of age, and in 1794 Perfect quoted by Gottgetren<sup>d</sup> described a case of depression followed by mania in a lad of eleven.

Delasiauve in 1852 was the first to describe mania in children according to Moreau,<sup>e</sup> who himself stated that among the mental affections of childhood mania was the first to which the attention of the authorities had been called.

I have studied exhaustively the literature of insanities in children and have collected 44 cases which seemed to be worthy of citation. Considering the importance of the subject there has been less consideration given to the study of psychosis in childhood than the subject deserves.

The rareness of youthful cases in asylums is well known. This is probably due to the fact that the children afflicted with psychoses

are more readily treated at home than adults, for the reason that the duration of the attack is shorter than in adults, as well as for the fact that the symptoms are less severe.

A study of the cases reported by me and quoted from the literature will show that, outside of a few cases of post-infectious mental states, the usual type of mental affections in children is the manic-depressive form of insanity. While in my own experience, the usual form of psychosis is the manic type of manic-depressive insanity, of thirty two cases collected from the literature thirteen were of the circular form, eleven of the manic form and eight of the melancholic type. The circular type or, as it has been termed by Baillarger ' in 1854, folie à double form, was described by Lunier ' and others, and was recognized by Moreau in his work in 1888. Melancholia has generally been supposed to be rare in children. Erminghaus ' had never seen an instance of periodic melancholia, though in 199 cases of insanity in children there were 24 cases of melancholia.

Besides these types of insanities, there are a number of cases, fairly common in my experience, of psychasthenia, in which the affection is characterized by mental instability, depression and excitability associated with phobias and hypochondriasis.

The infectious psychoses are well known, though I do not believe are of common occurrence. I found only twelve cases quoted in literature after a careful search. Spitzka ' found 7 per cent of his cases sequellæ to fevers. The post-febrile insanities of children, according to Ireland, are often found associated with hereditary predisposition.

Alexander " believed that 10 to 30 per cent of the infantile insanities were attributable to the acute diseases of childhood, especially the exanthemata.

Cases of insanity in children have been described following scarlatina (Ireland, " Welt, " Gerlach, " Joachin " ), diphtheria (Kuhn " ), pertussis (Mischede " ), typhoid fever (Welt, Jensen, " Jordan, " Feith, " Nierier " ) and a cold during malaria (Hume " ). In six of these cases hallucinations were observed, six were excited and agitated, one was depressed and had obsessions and one exhibited a stuporous state.

Except in the post-infectious insanities, hallucinations and delusions are not common, the symptoms consisting of either simple

depression or excitement. There were seven cases that exhibited hallucinations, two of which were cases of melancholia and only three were delusional, and one of these a case of melancholia. Systematised delusions do not occur, according to Kraft-Ebing,<sup>22</sup> and Ireland stated that fixed ideas and delusions are not common. The older the patient, or the more nearly he reaches 16, the more likely is he to become the subject of hallucinations and delusions for obvious reasons.

The youngest case of insanity in children on record is nine months. Of forty-seven cases collected by Berkham<sup>23</sup> there were 10 cases under 5 years of age, and most of the remainder occurred between 10 and 11 years of age.

Of thirty-nine cases collected from the literature by myself, including my own seven cases and exclusive of the infectious psychoses, there were fourteen under 10 years of age and twenty-five between 10 and 16.

#### CLASSIFICATION OF CASES AS TO AGE OF ONSET.

5 years.....2	11 years.....4
6 " .....2	12 " .....1
7 " .....1	13 " .....9
8 " .....1	14 " .....3
9 " .....3	15 " .....5
10 " .....5	16 " .....3

An interesting question arises in the study of these cases: What bearing has insanities during childhood upon the future mental health of the individual during adult life? It is to be noted that all the cases recover from the attack; few with any perceptible mental damage. We may well ask whether these attacks are not the forerunners of more serious attacks in later life. A case has only recently come under my observation which throws some light upon this question. A girl of 15 had obsessions at 3½ consisting of an impulse to kiss soiled objects, such as dirty boots and the seat of the water closet. From this she recovered and at 6 developed a psychosis after tonsilitis which lasted nine weeks. At 15 she lost interest in things, did things less well than formerly, was careless, became cross, unstable, depressed, readily fatigued, sleeping poorly and was apathetic. These symptoms are danger signals in a case with a psychopathic history and it is just this sort of a case which



needs wise care in order to prevent a recurrence of a psychosis.

The first case to be reported is interesting not so much by reason of the symptoms he presented, but on account of the fact that periods of excitement were regularly followed by a depressive state, usually with a period intervening in which the boy was perfectly normal, therefore being an example of the circular type of manic-depressive insanity.

George V., A boy of 15. Healthy parents. A grandmother's cousin died insane, and a second cousin was insane at the time of his death. There is no history of other mental or nervous disease or of tuberculosis or cancer.

George, the patient, had always been healthy except for an attack of diphtheria at 8 years of age and two attacks of erysipelas three years previously, and an attack of measles in childhood.

He was what his mother termed a sensitive child and his feelings were always to be considered a good deal. He was a good boy, was companionable and was said to be a leader among his playmates. On account of the attacks of erysipelas he had lost time at school and in the spring of 1912 he was pushed in his studies in order to pass his examination in the eighth grade grammar school.

In July, 1912, his mother stated that he began "to have something on his mind." He was very depressed, self-accusatory and considered himself very wicked. He practiced masturbation and was very depressed over this, attributing his condition to this habit. He went to bed for three weeks, complaining of insomnia, of general languor, and aching of his limbs and body. He worried continually over the wrong he had done and believed that he would never get well. At the end of five weeks these symptoms cleared up and he seemed to be normal for about a week, whereupon the symptoms recurred, and he went to bed again. During this attack he was circumcised and took osteopathic treatment.

At the end of two weeks he became exhilarated, thought of and talked about wild Indians and the things he had seen in moving picture shows, wished to buy guns and to run to stores. He began to steal things not especially useful to him or for which he had any special need, acknowledging the thefts and giving no satisfactory explanation of the act. He was in this attack very active, talking a great deal and distinctly excited. At the end of a week these symptoms subsided and a period of depression occurred which lasted from the middle of September to November 1. He then again became excited, packed his clothes and said he was going to leave home because the family could not trust him. He intended to become a hermit. This phase lasted two weeks, to be replaced again by a period of depression. It was while in this condition he came under my care on November 24, 1912. At that time he was depressed, looked unhappy, confessed to masturbation, which he considered a great sin and responsible for his illness; believed he was wicked and thought he could not recover.

He was readily fatigued, complained of general aches and persistent occipital pain.

His memory was poor; he said he did not know clearly what he was doing and had difficulty in concentrating. He was underweight, pale, his appetite was poor, his tongue was coated and tremulous. He complained of indigestion and was constipated. The examination of his heart and lungs was negative. The knee jerks were sluggish, his station good, his pupillary reactions normal. The dynamometer registered 46 both on the right and left. Urinary analysis revealed nothing abnormal.

He remained depressed from November 24 until December 5, when he became again excited. He sang or talked constantly, was exhilarated, happy, careless, purloined things from the closets and the nurses' bags, knocked on the doors of adjoining rooms, kicked around in bed, pounded on walls and wrote obscene letters. This period lasted 18 days, to be replaced by depression for 10 days. There then followed an interval in which he was perfectly normal for 14 days.

Periods of depression lasting about 10 days were followed by periods of excitement of the same duration, a period intervening of about a week to 10 days, in which he appeared perfectly normal.

Under treatment he improved, the symptoms during the attacks becoming less marked, and finally in June, 1913, he became normal most of the time and remained so for a few months. I have learned recently however that the symptoms returned. In the last 7 weeks he appeared to be normal again; is at a military school and from all reports is doing well.

The second case illustrates the manic form of manic-depressive insanity, with tendency to recurrences.

Joseph L., aged 9, applied for treatment January 25, 1905. There was no history of nervous diseases or insanity in his ancestors. The patient himself had measles at 3, typhoid fever at 4, and whooping-cough at 6.

Joseph was always bright, acquired readily, was fond of reading, was really precocious in his literary tastes, devouring Shakespeare's plays voraciously at the age of 9. He was, however, always somewhat irritable.

In November, 1904, two months before coming under my care, his teacher asked his mother to take him from school because of his bad temper, which was provoked by any attempt at discipline. On one occasion he took off his shoe and attempted to beat his teacher. When I first saw him in January, 1905, he was anemic and somewhat under weight. His physical examination was otherwise practically negative. The reflexes were normal; there were no sensory or motor troubles, and his pupillary reactions were normal. He was astigmatic and hypermetropic, but the eye grounds showed nothing amiss. His memory was good; there were no delusions or hallucinations; he was perfectly oriented and he concentrated well. His expression was rather excited, his eyes were shifting and he was physically restless. He was also somewhat resistive and it was necessary to exercise considerable care in talking to him in order to avoid arousing his antag-

onism. His mother informed me that he grew tired readily and that he was always more difficult to control at the end of the day; also that he was very quick tempered and had always to be handled with great care. I took him from school, advised rest, baths and increased amount of food and tonics, with the result that considerable improvement in his condition ensued. He was very much improved at the end of three months. He remained fairly well until June, 1906, although during this interval of a year there were occasional lapses, consisting of violent outbreaks at the end of the day, usually connected with some incident relating to his mother, but most of the time he was controlled.

In June, 1906, he became very excited, having periods every day of excitement, in which he would become profane, threw pillows and bolsters downstairs in anger and seemed to be in a very high temper. This subsided at the end of a few days, but there were recurrent similar attacks until November, 1906. From then until Christmas, 1906, he was in a very good condition. Then, however, he began to be excited again and was violent, rolled around on the floor, was bad tempered and profane. These symptoms persisted and on February 7, 1906, he got into an altercation with a man and boy on the street and afterwards he became very excited, cursed and complained to God for causing his condition. He said "God does not give me any show." "Why should he punish me so?" "I would be a great deal better dead." I sent a nurse to him, and gave him a partial rest cure. At first he was very violent, very abusive, and threatened to kill his mother and himself. He said to his mother, "You ought to go up an alley with a man," and made similar obscene statements. He was very resistive, refusing food, medicines and treatment. He attempted to choke his mother on many occasions, kicked his nurse repeatedly, rolled around in bed and swore at her. This attack lasted about two months, at the end of which time he gradually improved.

He returned to school in September of that year and remained at school until one year ago, having spent two years in the West Philadelphia High School.

Since a year ago he has taken two or three positions as a clerk. He did not care much for the work, but said he preferred the life of a teacher or a newspaper man. He was apparently normal until July, 1913, when he awoke with a headache one morning and remained out of work that day. His mother dates his present attack from this time. Joseph himself believes that the present attack began on the 6th of August, 1913, although he remained at work until the 14th of September, since which time he has not worked. He states that he has been fighting the thing off ever since the 6th of August. He could not keep on with work because he "got all balled up." He was quiet, somewhat depressed during the autumn and he showed no violence until January 1, when he broke a sink when irritated over some clothes that he had bought that did not fit him. Four days later he refused to get up in the morning, kicked the walls of his room, swore and shouted out loudly, calling his mother names and swearing at her. On the 8th of January, at 4 p. m., suddenly, without provocation, he said to his mother,

"Damn you," and broke a flower pot, then ran upstairs and broke things up. He later asked for coffee and said, "Make it damn quick."

In the evening started to go out, saying to his family they would never see him again. In trying to restrain him from going out a struggle ensued, in which he smashed a couple of doors and engaged in a battle with his brother. Officers were summoned and he fought them, but was finally subdued and taken to the station-house, where the police surgeon communicated with me and by my advice he was sent to the detention ward at Blockley. He was transferred from Blockley to the Pennsylvania Hospital for the Insane at the end of two weeks time, where he has remained ever since. Since his admission he has been very quiet and orderly. He does not recognize his condition or that he behaved in an abnormal manner, or at least does not admit it.

Katharine G., aged 16, illustrates the manic type. She has a colored father and a white mother, both of whom were well. The family history is negative. There is no history of insanity or nervous diseases. Katharine had the usual diseases of childhood, menstruated at thirteen and was regular. Her present trouble began shortly before her visit to my clinic at the Polyclinic Hospital July 10, 1911. She became restless, slept poorly, dreamed a good deal and was very absentminded. She was disorderly, frequently arose at 3 a. m. and went out of the house, or during the day wandered into other people's houses. She was very cross and disobedient. She heard people talking about her and conversed with the voices. She made fists and struck at people. She believed that the neighbors called her all sorts of names, and she wanted to fight them. Their house was the only decent home in the court.

Katharine was a girl of average height and development. There were no palsies, the tongue protruded straight and in the median line, the station was good and the knee jerks were equal and normal. The examination of the heart and lungs was negative. She gradually improved and at the end of a month the hallucinations and delusions had entirely disappeared. She was still well a year later, at which time she had been working for some time.

The fourth case is one of the manic type.

Vincent W., aged 12, was admitted to the Philadelphia Polyclinic Hospital November 30, 1911. Both parents were living. The father had had a chance and the mother had had two miscarriages. Two brothers died in convulsions about one year of age, but otherwise the family history was negative. Vincent was born at term without instruments. When three years old he fell from a shed and struck the back of his head, but was not rendered unconscious. At the age of 8 he had a convulsion, but none since.

About a month before his admission he began playing truant, was inattentive at school, and silly in his conduct. He would twitch his face and draw on his desk. He was constantly thinking of cowboys and Indians suggested by moving pictures. He played in a tent in the yard constantly

and decked himself like a cowboy. He hid himself in the cellar and was found lying prone on the ground, apparently deep in some cowboy adventure. He was seen to draw a sharp knife over his sleeping sister. His expression was wild, his eyes restless and staring. It was difficult to hold his attention and he was physically very restless, thrashing around in bed and was kept in bed with some difficulty. He complained of frontal headaches associated with some nausea, dating since the onset of his mental symptoms. His appetite was good and his bowels regular. He was thin and anemic, but slept well. The station was good. The pupils which were widely dilated reacted normally. The extraocular movements were intact and he had hypermetropic astigmatism. The knee jerks were normal, and there was no ankle clonus or Babinski phenomenon. The examination of the heart and lungs showed no abnormality. Vincent gradually recovered and was discharged cured at the end of a month.

Samuel S., a Hungarian, aged 16, illustrates a mild manic type. He came to the clinic of the Polyclinic Hospital, April 12, 1912. There was no history of insanity or nervous diseases. He had had measles, but otherwise had not been sick since birth. He went to school until a year previously and had done well.

His present trouble began three weeks before his visit to the hospital. He awoke excited in the middle of the night and thought that the house was on fire and that a man was robbing the house. The next day he was confused in his speech, was difficult to control and was excited. Upon examination he was confused and incoherent. His replies to simple questions consisted of merely articulating a letter of the alphabet. For example, when asked where he lived his reply was "M." He could not sleep and wandered around in an excited manner.

The physical condition was fairly good but he was somewhat thin and anemic. The tongue was protruded straight and in the medium line and was coated. His hands were cyanotic and cold. The station was good and the knee jerks were much increased and equally so on both sides. The physical examination was otherwise negative. He was admitted to the wards, but was so disturbed that it was impossible to take care of him on account of his excited condition and he was taken to his home the next day. Under treatment at the end of three months his symptoms disappeared and he was able to go to work. He was still well at the end of nine months, since which time I have not seen him.

W. N., aged 13, applied to the Philadelphia Polyclinic Hospital April 13, 1914. This case is an example of transient brief maniacal attacks. The father had had an apoplectic stroke; was living and was not alcoholic. The mother was asthmatic. There was no epilepsy, tuberculosis or insanity in the family. William had six brothers and a sister living and well. He had had convulsions when a baby and chorea three years ago. He was bad tempered as a child. He was perfectly well until four weeks before applying for treatment, when he began to act strangely. There was first a feeling of sleepiness and a sensation as if the blood had rushed to his

head and he acted as if in a temper. He remained at school until two weeks ago. Five days previous to his first visit he fell unconscious and frothed at the mouth. Three days later he became very excited, talked loudly and swore. He used obscene language, threw things at the members of the family, broke up furniture, threw knives about, and tried to jump from the window. This condition appeared without provocation and lasted for about two or three hours. The following day he had a second attack of a similar nature. The family said that in the interim he did not want to go out to play as usual and sat with his head bowed forward and was very quiet and talked very little. He said to his family that he wanted to run away and drown himself.

Upon examination he stated that he was very unhappy. No delusions or hallucinations could be elicited and he was perfectly oriented. He had, however, no memory of the attacks of excitement. He was mentally sluggish and unable to describe his sensations or his feelings. He complained often of vertical headache and slept poorly, sometimes remaining awake all night. His tongue was slightly coated and teeth indented. His pupils were equal and reacted to light and inaccommodation. His hands were cold and somewhat cyanotic. His pulse rate was 120 and his heart sounds were perfectly clear, but the tension of the pulse was high to the finger touch. The knee jerks were increased, but equal on both sides. His face had a somewhat anxious expression and was pallid. I admitted him to the wards and placed him on the rest treatment with bath, massage, and forced feeding. He improved rapidly, became cheerful and alert, and was discharged to the out-clinic at the end of three weeks. I saw him a few days ago, and he was still well.

#### MELANCHOLIC TYPE.

E. W. is one of two cases of pure melancholia in my series. She was 11 years old when she applied to the Neurological Department at the St. Agnes Hospital on February 17, 1898. Her father was subject to nervous headaches and her mother was living and well. There were five other children, all of whom had had spasms, except one, during teething. One of her brothers at the time of his death was epileptic and insane. The patient herself was a 9-month child and was born without accident; was breast-fed, walked at 12 months and talked at 14 months. She had had scarlet fever eight years previously. Her chief complaint at the time of applying for treatment was epileptiform attacks, dating two years previously. She has had one convulsion at 2 years of age and one again at 4. Since November, 1896, she has had five or six grand mal attacks a year with numerous petit mal attacks.

Her physical condition was fairly good. Her tongue was coated; her teeth were good and her palatal arch was high. The knee jerks were exaggerated and equal on both sides. The station was good. The heart and lungs were normal. She had no scars on her head and there was no history of her having had an accident. An examination showed absence of

any source of reflex irritation in her nose and her vision was properly corrected.

She was clever at school and was normal, cheerful and good-natured.

In 1898, when she was 12 years old, while listening to instruction for her first communion she became very much depressed. She was very unhappy; felt that she had been guilty of committing many sins. Every act she interpreted as a sin. The depression was very much worse upon awakening. She was much absorbed by these depressive thoughts and did not recognize at the time that they were delusions. These symptoms lasted about a month, when the depression cleared up entirely. Incidentally the epileptic attacks diminished gradually in frequency and in 1904 ceased entirely.

Morris F., aged 13, the second case of melancholia, applied to the Polyclinic Hospital February 16, 1914. Family history was negative. There had been no history of insanity or epilepsy or other nervous diseases. The patient had had measles, but had otherwise enjoyed good health. He was clever in his school work, having reached the Fifth Grade A.

His present illness began in June, 1913, when he was struck by a baseball over the left eye. He was not rendered unconscious and was able to leave the hospital in a day. He has been nervous and restless ever since. His father stated that he acted in a stupid manner; he slept very poorly; complained of headache, especially at night, and in the three weeks prior to his going to the hospital had dizzy spells. Two months ago he fell unconscious to the floor, but did not have any convulsion. Recently he became very much depressed, refused his food and did not play with his companions, sitting around the house all day long, voluntarily making no remark to anyone.

At the time of the examination he was apparently very much depressed. His face was expressionless, his eyes were fixed in one direction and he could be aroused from his reverie only with great difficulty. He denied hallucinations of hearing. He did not know why he was depressed or what he was worrying about. He mumbled his replies to the questions of the examiner, blinking his eyes and giving indefinite replies. He never smiled and said that he felt sad and was sick at heart. At times he would walk constantly around the house without any object. This patient is still under observation, having improved very considerably, though he had not entirely recovered when seen last.

In a thorough search of the literature available I collected forty-four cases which seemed to have been recorded sufficiently carefully to warrant quoting. These cases can be divided into the manic-depressive type, including the circular, manic, and melancholic types, post-infectious psychoses, and one case interesting as illustrating a precox type of psychosis which is not readily classed. These cases have been described briefly, but in sufficient detail to preserve the characteristics of the symptomatology.

## CIRCULAR TYPES.

CASE 1.—Gottgetren. Male, aged 10. Heredity untainted. At 7 concussion of the brain, followed by failure of memory. Two days later unruly and restless, followed by a period of depression. Sent to an asylum. Hallucinations of voices in his abdomen, also of sight. Fears he will be killed and believes that a patient removed one of his ribs. Recovery in about one year.

CASE 2.—Von Brero. Male, aged 13. Family history of insanity. Unusual behavior attributed to naughtiness first, then suddenly developed delusions that the neighbors were plotting against him and heard voices from the next house conspiring against him. He was going to be murdered. Became restless, profane and threatening, at times depressed. Sleep restless and fitful. Refused solid foods and wet his bed. Symptoms associated with movements like oscillations more or less regular and choreiform in type. A period of exaltation was followed by a period of depression. Excited periods were characterized by maniacal conditions, the depressed periods by stupor, confusion, hallucinations and atony. Choreiform movements were present only during stuporous periods and were intentional. The periods varied from six to twenty days and followed close upon each other. Cured in about one year.

CASE 3.—Zimmer. Female, aged 9. Insane history. At the age of 8 suddenly would whirl companions around in a dance and would leave the class-room for no reason. Said she had been accused of stealing; was infested with vermin; was unhappy and threatened suicide. Was admitted to Mendel's Clinic, where she showed symptoms of manic excitement alternating with melancholic depression, with at times periods of comparatively normal conditions intervening. Results not stated.

CASE 4.—Hahn. Male, aged 10. Acute mania following a blow. No heredity. Intelligent before. Was struck by a cane on the left frontal and parietal region. This was followed by pains in the head and a sensation as though the head was soft at the point of blow. Five days later he was listless and apathetic. Sensations of terror around the heart and hallucinations of sight and sound developed. There was self-reproach delirium, accompanied by right facial twitching, rhythmic opening and closing of the mouth. There was a manic condition, followed by depression. The next day the condition was aggravated by irritability. Struck his mother and barked like a dog. There was verbigeration. Cured in three months.

CASE 5.—Wells. Female, aged 15. Negative heredity. At 14, after hard work at school to secure a prize, developed melancholic depression; insisted upon having her dresses very short and ate little so as to retard development. Demanded a tight corset to compress her chest and thus prevent normal development. If opposed became violent. In another month chorea symptoms intervened for two weeks, but returned again in two months with other symptoms becoming more pronounced. She screamed violently and talked incoherently; exhibited hallucinations of sight; refused food, and reproached her mother for leaving her. Could not sleep. Seven months



later she improved very much, but the symptoms returned in a month and she had to be removed from her home on account of being so noisy. She improved at the end of a year and eight months from the beginning of the disease and remained well.

CASE 6.—Tremoth. Male, aged 14. Heredity positive. Normal before onset. Became reserved and apathetic and listless, refused to take food and lay perfectly listless; incoherent and mumbling. Later state of fear and tremor; loud inarticulate words for a day or two. Later he suddenly became lively, unruly, destructive, but still mute for an hour. This was repeated on two other occasions. Recovered in three months.

CASE 7.—Tremoth. Male, aged 13. Mentally deranged. At the age of 12 began to have hallucinations and feared that someone was going to hurt him. These attacks of fear recurred every eight weeks. During the interim periods of unwonted hilarity and sprightliness. Cured at the end of a year.

CASE 8.—Lehr. Male, aged 9. No heredity. Under strict supervision of studies there developed fear and melancholic depression, followed by states of excitement and rage, stubbornness and unruliness. Recovered completely.

CASE 9.—Esquirol. Female, aged 8. Normal intelligence. Sustained a severe shock during the storming of Paris and showed signs of mental disease. There were states of somnolence, alternating with unruliness, noisiness and vulgarity.

CASE 10.—Esquirol. Male, aged 15. Illegitimate. Heredity taint. Sudden violence and incessant talking, alternated with periods of misery and depression. Improvement finally set in.

CASE 11.—Ray. Female, aged 14. First symptom loss of memory, then became violent and uncertain, refusing food; dirty and untidy. She moaned piteously. Later she became self-absorbed so that she failed to understand the simplest orders. She recovered.

CASE 12.—Nasse. Female, aged 15. Poor heredity. Began with melancholia at 14 and developed into periodic mania.

#### MANIC TYPES.

CASE 13.—Fletcher. Female, aged 5. After being threatened with being shut up in a closet and having heard tales of dark places where witches live and the like, was very much frightened and became pale and cold and for months thereafter raved and muttered about hobgoblins. When she recovered she was very much changed.

CASE 14.—Fletcher. Male, aged 15. Intelligent. Suddenly became profane and began to talk incessantly of himself; smoked cigarettes excessively and boasted of his capacity for strong drink and his success at cards and his escape from hairbreadth adventures. He believed that he was a detective. Recovered.

CASE 15.—Fletcher. Male, aged 10. Neurotic parents. Imagined himself an Indian and was uncontrollable, attacking his parents and shooting at

them with arrows. He wandered in the woods at night. He had attacks of convulsions which lacked the elements of epilepsy. Recovered.

CASE 16.—Holmes. Male, aged 13. Heredity negative. After a quarrel with his sister became very much excited and threatened violence against his mother and himself. At first he was mischievous, singing and whistling and talking incoherently. He regained his normal tone in ten days.

CASE 17.—Holmes. Male, aged 10. Average intelligence. After a fall, in which he fractured his humerus, seemed to be too happy. He was irrational and showed flurries of excitement and talked excessively about his accident. Normal in four weeks.

CASE 18.—Holmes. Female, aged 7. Average intelligence. Negative history. Suddenly began to talk excessively, rhymed and commented constantly on what went on around her. Her attention was gained with difficulty. She exhibited much motor excitement. Cured in six weeks.

CASE 19.—Liebers. Male, aged 5. No heredity. Following diphtheria at 4 was unable to talk or walk for six weeks and then became restless and destructive, refusing to eat or sleep. Stands up in bed and laughs gleefully and throws his arm affectionately around the doctor's neck and then throws himself back in bed again. Violent motions and grimaces in a perfectly tireless manner. Attention could not be gained without great effort. Duration one year, followed by cure, although feeble-minded.

CASE 20.—Schuller. Male, aged 6½ years. Well until one year previously, then an indefinite fever lasting about a week. Then began to act strangely; talked to himself for hours; refused to eat; lost control of his functions; could not talk; countenance smiling and walked with a peculiar hop. Some improvement.

CASE 21.—Engelhorn. Male, aged 11. Became violent and excited after an explosion in the garden of his home which caused the death of his brother. Symptoms lasted only a short time.

CASE 22.—Steiner. Male, aged 6. Showed periodic mania. There were periodic paroxysms of rage requiring strait-jackets and opiates. Result idiocy.

CASE 23.—Holmes. Male, aged 13. Heredity negative. After a quarrel with his sister became very much excited and threatened violence against his mother and himself. At first he was mischievous and singing and whistling and talking incoherently. He regained his normal tone in ten days.

#### DEPRESSIVE TYPES.

CASE 24.—Noyes. Male, aged 13. Heredity negative. Mental depression and crying spells. He said his fellow pupils did not like him and accused him of onanism. Some choreiform movements, but not chorea. Cured in two years.

CASE 25.—Noyes. Male, aged 13. History negative. Restless, crying spells, anemia and insomnia; talked obscenely to his mother. Complained of being abused by the other boys. Mental depression, everybody was making fun of him. He became hyperesthetic and complained of globus hy-

stericus. Some choreiform movements, but not chorea. Cured in six months.

CASE 26.—Beach. Male, aged 14. After attending a funeral of a friend who had committed suicide said, "I must kill myself, too," and seeing the cord at the place of the suicide proceeded to take his own life.

CASE 27.—Ireland. Female, aged 11. Melancholia. She had nose bleeds appearing with attacks of loud wailings. Heredity and alcoholism were emphasized as predisposing causes. Recovered in a year.

CASE 28.—Fletcher. Female, aged 13. After the death of her mother was sent away to school. On her return from vacation she became melancholy and refused to work, spending most of the time in a semi-conscious condition in bed. She told a neighbor that she was pregnant and that her father had seduced her. Father later became insane, but the patient apparently recovered at the end of four years.

CASE 29.—Tremoth. Male, aged 16. Uncle insane. Intelligent and normal previously. Suddenly grew quiet and avoided seeing people and was hallucinatory. He lay with his eyes closed, refusing food, and was full of unaccountable terrors. Cured in six months and remained normal.

CASE 30.—Savage. Female, aged 11. Intelligent. Became very religious at 10, seeing angels and communing with them. Began to menstruate then. Then lost faith in religion and attempted to kill herself. Intense likes and dislikes, with precocious tendency towards the other sex.

CASE 31.—Gregory. Female, aged 10. Negative heredity. Normal child. After a disappointment became sad and quiet; complained of headache and refused to eat. Upon examination she was profoundly depressed; her head and body bent forward. There was no spontaneous speech. She complained of headache and pain in the stomach. She was oriented and her memory was good. No hallucinations or delusions. She improved at the end of three or four weeks, but the depression returned in a few days. She recovered.

#### POST-INFECTIOUS PSYCHOSES.

CASE 32.—Kuhn. Female, aged 6. Exhibited acute stuporous dementia with epileptic attacks and chorea following diphtheria.

CASE 33.—Mischede. A child of 5 years and 9 months following whoop-cough developed hallucinations of sight and hearing, which were preceded by sudden feelings of heat and cold.

CASE 34.—Welt. Female, aged 12½. Family history good, except for neuroses. Two weeks after convalescence from typhoid became depressed with insomnia and anorexia. She could not rid herself of the idea that she should kill her mother. Recovered in a few weeks.

CASE 35.—Welt. Male, aged 5. Good health. After an attack of scarlet fever became restless and irritable; did not recognize his mother; became terror stricken; wanted to rush out of the house because the house was on fire. Staring countenance. Recovered in forty-eight hours.

CASE 36.—Gerlach. Female, aged 10. Insane history. Normal child. October scarlet fever; January nephritis. March 10 suddenly had spasms,

which lasted forty-eight hours. Aphasia ensued. She became irritable, quarrelsome and destructive. Dirty in her habits and crawled around on her hands and feet and mumbled.

This condition lasted for two months. Her speech had returned, but was monotonous, alternating with clear, lively and rapid speech. She had hallucinations of sight and hearing and she could not feed herself. Sensibility seemed to be lost except on the soles of the feet. There was an attack of angina later with a rapid pulse. Great motor weakness ensued. Four months after the onset there was contracture at the left knee, with increased reflexes. She began to improve gradually and was cured at the end of nine months. She described her symptoms afterwards as follows: She had a feeling of terror; someone was about to kill her. She saw black figures on the ceiling and members of her family standing about her bed scolding her. She did not speak, because she was afraid. Gerlach believed that the symptoms were all the result of uremia, which was favored by heredity.

CASE 37.—Joachim. Male, aged 4½. Heredity stigma. During convalescence from scarlet fever, complicated by abscesses in the throat, suddenly developed raging frenzy and hallucinations, with symptoms of collapse. Refused food; was destructive and passed her urine and feces involuntarily. Symptoms disappeared in forty-eight hours.

CASE 38.—Hume. Male, aged 2½. Intelligent, neat and orderly, but after catching a cold during an attack of malarial fever became restless, biting paper and rubbish and was destructive. His speech, previously plain, became indistinct. Cured in two weeks.

CASE 39.—Jensen. Male, aged 9. Negative history. During convalescence from typhoid fever suddenly became very talkative. There was emotional exaltation and motor agitation, anger or tears over trifles and then delusions of grandeur. Recovered in about four weeks.

CASE 40.—Jordan. Male, aged 7. During convalescence of typhoid fever four weeks after the temperature had become normal became suddenly violent and had hallucinations of sight. Frogs crawled about; he had only one arm, was incoherent; lost control of urine and feces; was sullen and suspicious. Recovered in four weeks; no rise of temperature during the attack.

CASE 41.—Feith. Male, aged 5. Negative heredity. Typhoid fever, followed by pronounced motor disturbance, aphasia combined with fear and melancholic depression lasting three weeks. Sudden return of speech and the child became lively and unruly and for two weeks talked incessantly and was in a continual state of exaltation. Recovered.

CASE 42.—Welt. Male, aged 10. Negative heredity. Intelligent and studious. After an attack of diphtheretic sore throat and albuminuria he began to be restless, talkative and impudent. This was followed by paroxysms of rage, destructiveness and brutality. Bit and choked his mother; tore the clothing from her body. These paroxysms were sometimes preceded by periods of stupor, staring countenance, bodily rigidity. Hallucinations were rare and were those of sight. Complete recovery in about five months.

CASE 43.—Nierier. Male, aged 13. Periodic frenzy after typhoid fever, then alternating depression and exaltation.

CASE 44.—(This case suggests an early dementia precox.) Wells. Male, aged 14. Somewhat below average intelligence. Left school at 12 and went to work as a cash boy; at which age he developed persecutory hallucinations; wandered the streets for three days before apprehended and could give no account of his whereabouts during this time. He was returned to school, but one day did not come home and was found a week later in a vacant lot ragged and terrified. Was returned to school, where he remained for six months, making fair progress, although showed some evidence of being suspicious of those about him.

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## LEGISLATION IN REFERENCE TO STERILIZATION.

By HUBERT WORK, M. D., PUEBLO, COL.

For the purpose of this report letters were addressed to officials of the forty-nine states and replies received from thirty-nine states. These letters asked five pertinent questions:

1. Has your state a law authorizing the sterilization of mental defectives?
2. When was it enacted?
3. Is the law utilized or ignored?
4. Has this law been upheld by the courts?
5. If sterilization has not been legalized, have legislative bills been introduced?

To question No. 1 an affirmative reply was received from eleven states: Wisconsin, Connecticut, New Jersey, New York, Indiana, Iowa, California, North Dakota, Michigan, Washington and Nevada (criminals only).

A negative reply from twenty-eight: Alabama, Arizona, Arkansas, Colorado, Delaware, Idaho, Illinois, Louisiana, Massachusetts, Maine, Maryland, Mississippi, Minnesota, Missouri, Montana, Nebraska, North Carolina, New Hampshire, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Vermont, West Virginia and Wyoming.

To question No. 2 it was learned that Indiana passed such a law in 1907, Connecticut and Washington in 1909, Nevada in 1911, New York in 1912 and Wisconsin, Iowa, North Dakota and Michigan in 1913, indicating increasing public interest in the subject.

Question No. 3 brought advices that the law was invoked in three states, ignored in two and the question itself was ignored by thirty-four states, but from other sources it was found the law's enforcement is being subjected to the delays in courts of five states.

Question No. 4 gathered that the law had been held constitutional in California and Washington, is before the Iowa courts



now, and has been held unconstitutional in Wisconsin, Connecticut, New York, North Dakota and Michigan.

Question No. 5 discovered twenty states which had attempted but failed to secure such a law, and twelve have never troubled about it. It is only fair to say, however, that of these twelve, eight are Southern states, in some of which, I am advised, sterilization is practiced whenever the coexistence of sex, age, mentality and color seem to indicate it, without resort to the vexations and delays incident to legislation.

The report of your committee of one year ago will apply to-day as to legal enactments by adding North Dakota and Nevada, as few state legislatures have convened since then.

The attitude of courts fluctuates. The opinions of those deciding these measures to be unconstitutional are fruitful fields for studies in abnormal psychology, while the vetoes of governors sound like pleas for the preservation of what they seem to regard as the chief end of man.

These men, although in high places, do not appear to have grasped the purposes of sterilization, but couch their opinions in words which tend to confuse its objects and appeal to the emotions of the hysterical.

Little can be hoped for of a constructive, humanitarian nature from the legal profession—from men trained to think again in exact phraseology what has previously been stated by others; men who look not through the hindsight and foresight at once, but always backward for a precedent.

Quite another type of educated people are, however, interested in sterilization to whom foresight is everything, *i. e.*, the educators of children.

Discouraged by their futile attempts to inculcate morals even and hopeless of the literary advancement of the imbecile, they will very soon apparently be a unit in their demand for his elimination as a progenitor of the human race.

The Board of Education of New York recently recommended the sterilization of its defective boy pupils, stating that there were 3000 defectives in their schools, and urged the governor to appoint a committee to take charge of them, regardless of parental sanction.

Educators have traced the relations of the irrational individuals who are coming to our insane asylums to the defective, incorrigible, backward pupil of the public schools.

Sterilization is apparently being held in abeyance in some states having already legalized it, by injunctions initiated by those not in sympathy with it. Some time will be required to wear out this opposition to it, or for the raising of some newer public issue which will come to divert into other channels this peculiar feature of the public conscience which busies itself with great questions about which it knows little, but which stays the hand of progress.



# THE PRESENT STATUS OF THE APPLICATION OF THE ABDERHALDEN DIALYSIS METHOD TO PSYCHIATRY.

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Direct injection of a foreign proteid into the blood stream gives rise to the formation of a substance (proteolysin) capable of breaking down that particular proteid into simpler products. If, for instance, egg albumin be injected into an animal, there is later found in the blood stream a ferment capable of destroying egg albumin by catalysis. Similarly, albumins derived from a given organ, when injected into another animal, will give rise to ferments of specific action. Still further, Abderhalden claims that a given cell proteid—*e. g.*, liver-cell albumin—is foreign to the blood stream of the individual and if, through any error in the formation or activity or destruction of this liver-cell albumin, it finds its way into the blood stream, it gives rise here also to ferments destined for the destruction of this albumin, to render it innocuous or to perpare it for excretion. These ferments Abderhalden calls “defense ferments” (*Schutz-fermente*), or better, perhaps, “protective enzymes” (*abwehr-fermente*). The specificity of ferments formed against foreign proteids (bacteriolysins, proteolysins) may be said to have been proven. Abderhalden claims that ferments formed against the cell albumins or their products native to the individual but foreign to the blood stream are also absolutely specific, and this forms the crux of the theory. Frank, Rosenthal and Biberstein, in a general study of this question, conclude that there may occur in the circulation proteid ferments of an exquisite specificity, and others of non-specific nature, and that excessive flooding of the circulation with foreign proteid seems to generate non-specific ferments.

In certain disorders of the metabolic processes connected with cell-nutrition and cell-activity, unaltered cell proteids or

incompletely or falsely catabolized cell proteids may find their way into the blood stream, where they act as foreign materials. This is the condition known as "disfunction," in the sense of Abderhalden, and the presence of these catabolites \* may give rise to the formation of specific anti-ferments.

Abderhalden's method for determining the presence of these ferments rests on the fact that the proteid molecule is too large to allow of diffusion by dialysis through an animal membrane, while certain products of its catabolism by proteolytic ferments—i. e., the peptones—are diffusible and may be recognized by a chemical reaction. Thus, if we place inside a thimble of such membrane an albumin recovered from a given organ—e. g., brain and serum from a patient in whose circulation there occurs an anti-brain ferment—the action of the ferment on the albumin results in the formation of peptones which diffuse and can be recognized in the liquid surrounding the thimble by the biuret or ninhydrin tests.

The first practical application of this was to the diagnosis of pregnancy. The theory on which this is based is that the cells of the chorionic villi or their proteid constituents or catabolites find their way into the maternal blood stream and there stimulate the formation of anti-ferments of specific type. When blood serum containing such anti-ferments is brought into a dialyzer with proteid extract of placenta, disintegration takes place, with the formation of dialyzable substances which diffuse and are found outside the thimble. Normal sera (in the sense of sera of non-pregnant individuals) are found to be lacking in ferments which will split placental proteid and hence give a negative reaction. I need not here go into the results of the test as applied to pregnancy.

Fausser was the first to apply the tests to cases of mental disease; his first report appeared late in 1912, and since then the literature has grown to a considerable amount. Before taking up the results of these investigations, it may be well to call attention to the greater difficulty encountered here in obtaining the various

\* The term catabolites is here used to convey the meaning of *Abbauprodukte*. It may be remarked that this term could hardly be considered to cover unaltered cell proteids, but it suggests the group of split products resulting from incomplete or faulty catabolism.

organ albumins than in the pregnancy test. It is an easy matter to obtain fresh placental tissue for the preparation of the proteid, but the finding of material suitable for extracts to test for the presence of ferments against the other organs of the body is more difficult. Perfectly fresh material from cases of accidental death is of course the ideal, but anyone who has undertaken the collection of such material will appreciate the difficulties. Usually a considerable number of hours elapse before such a cadaver finds its way to the autopsy table, and the possibility that autolytic changes may have taken place during this period must be considered. In general, the freshest autopsy material comes from hospital cases where death has been anticipated; and here, of course, one is dealing, in theory at least, with pathological material, and as yet we have no definite knowledge as to how far ante-mortem disease conditions may affect the reactions. Lampe and Papazolu have demonstrated that in cases of Basedow's disease the reactions are much stronger when proteid extract of a thyroid from a case of Basedow's disease is employed. One or two investigators have followed this lead in using extracts of brain and other organs for testing similar cases—*e. g.*, general parietic brain extracts against serum from cases of general paralysis, etc.—but so far with no noteworthy variations in the results obtained by the use of extracts from other human sources. This difficulty in obtaining proper extracts has naturally suggested the use of animal organs. Abderhalden has experimented with this idea and reports good results. Kafka similarly found them useful, but this phase of the subject is still in a very early experimental stage.

In Fauser's first paper he reported positive reactions against thyroid in all five cases of frank thyreogenous disease, and in one severe case also a reaction against brain substance. In a series of cases of dementia præcox he found five positive reactions against testicle extract in eight cases, and eight reactions against brain in eleven cases. In six cases of tabes and general paralysis he reports reactions to brain substance in all. Later, in another series, seven male dementia præcox cases gave positive reactions against testicle, and four female against ovary. Six cases of this series also gave reactions against brain.

Following this publication, came a considerable number of

papers which for the most part supported Fauser, but also showed a considerable number of dementia præcox cases in which the thyroid gland or thyroid gland plus brain, with or without the sex glands, was positive; and Fauser, in 1913, in reviewing the subject, interprets the results as follows: For the majority of cases of dementia præcox (Fauser's own cases were chiefly hebephrenic), there is a primary disturbance—*i. e.*, a "disfunction"—of the metabolism of the sex glands. For a small minority a disfunction of the thyroid also appears. An hereditary disturbance is suggested for the sex glands, and an acquired for the thyreogenous. Fauser suggests as a theory that the blood foreign albumins characteristic of the sex glands, when thrown into the blood stream either unaltered or incompletely or improperly catabolised, stimulate in the blood the specific ferments, and, either by themselves or as split products from their catabolism by the ferments, work damage on the brain, thereby giving rise to a disfunction of the brain, which in turn results in an anti-brain ferment. In the small minority the reactions do not appear, or come and go, in some instances suggesting a parallelism with the clinical course. In end stages also the reactions are sometimes negative; *i. e.*, the disease is no longer an advancing process, but a defect stage.

In cerebral syphilis and general paralysis, reactions are found chiefly against brain substance, though occasionally also against other organs.

Fauser claims reactions against sex glands, or sex glands plus brain or thyroid, or thyroid plus brain, or sex glands plus thyroid plus brain, to be characteristic of dementia præcox, and offers such reactions as a means of differential diagnosis from manic-depressive cases, and as a means of indicating the efficacy of therapeutic measures.

Wegener, Fischer, Neue, Theobald, Römer, Bundschuh and Römer, Mayer and others reported series substantially corroborating Fauser's work. Several pointed out, however, that reactions against other organs than brain were met in general paralysis, and that these might follow Fauser's sex-gland-thyroid-brain formula for dementia præcox.

Wegener found in epileptics a brain reaction only, and only then when dementia had set in. Binswanger studied a short series

of epileptics and found 60 per cent positive to brain, and offered the following results and suggestions: Positive reactions speak with considerable surety for epilepsy and against hysteria. During the interval, the cases fall into a positive and a negative group. It is not possible thereby to separate the organic from the "dynamic constitutional" types, as both positive and negative groups appear in each type. A negative reaction in a given case may indicate that there is no progressive anatomical process, and we may hope that dementia will not ensue. We cannot, however, foresee possible increase in severity or number of attacks and the later development of a positive reaction and dementia. Leri and Vurpas studied 25 cases of epilepsy in the Bicêtre and Salpêtrière, and found the same percentage of positive reactions against brain as Binswanger. Here, however, their agreement ended. They could find no relation to the time of the last or approaching attack, nor to frequency of attacks, nor to duration of the disease. Positive reactions were in somewhat higher proportion in the demented cases, but the series is too small for definite conclusions.

Allers studied a short series of cases of various types, using brain only for the tests; he got results less clear than Fauser's, and believes it probable that an unspecific ferment may be present in those cases giving positive reactions to several organs. Willige reported a negative result toward brain in an undoubted general paralytic. Of two brain tumors, one reacted positively toward brain, the other negative toward brain and positive toward thyroid; and he concludes that more observations are necessary before the method can be considered trustworthy.

Mayer points out that while an overbearing majority of the functional and normal cases are negative and the positive reactions in dementia præcox are in the large majority, there are cases where decision is impossible; *e. g.*, general paralysis giving a dementia præcox reaction, or dementia præcox sera with a positive brain reaction only. Kafka reports one case of positive reaction to brain in an acute maniacal excitement, and suggests the possibility of a temporary metabolic disturbance in the manic-depressive at the height of the attack. Golla reported a series with a considerable proportion of the so-called paradoxical reactions. Twenty-five per cent of his manic-depressive cases and 14 per cent of his epileptics reacted to the sex glands. Like-



wise, Plaut found positive reactions to the sex glands in manic-depressive and hysterical cases. Maass reports that imbeciles in certain cases give a reaction of sex glands and brain entirely similar to the dementia præcox formula, while certain idiots give a reaction to brain and thyroid not unlike Fauser's thyroid group of dementia præcox. These reports, if substantiated, are of interest either as indicating that in some idiots and imbeciles there is a continuing state of perverted metabolism rather than a stationary defect, or as suggesting that some of these cases may belong to the class emphasized by the French writers, of an early abortive dementia præcox.

Kafka calls attention to the fact that disturbances of the glands of internal secretion of sufficient severity to result in complete loss of function can give no ferment reaction, and reports negative findings in six cases of non-menstruating idiots and one psychopathic patient who had castrated himself some years previously.

In explaining these discrepancies, the bulk of the blame is laid to errors in technique, and all authors agree that the most painstaking methods are necessary for accuracy. Kafka suggests that no reports should be received in evidence without the publication of the technique adopted, including methods of control, source of organ extracts, etc. Abderhalden himself calls attention to the many sources of possible error of a strictly technical sort, and warns against the use of sera which are not absolutely fresh and against experiments which are not controlled at all possible points. The difficulty in obtaining normal organs sufficiently early post mortem has already been mentioned. It is necessary also that the material be rendered blood-free; and in many organs—such, for example, as the liver—this process is a difficult task. Blood albumins remaining in the extract may becloud the reaction.

One possible source of error, which seems so far to have been overlooked, is the difficulty of getting a strictly pure organ-proteid extract. With the brain, for instance, the process consists essentially in mincing and washing to render the organ blood-free, and then in the removal of the fats by extraction with ether or carbon tetrachloride, and finally in repeated boiling until the water yields a negative ninhydrin reaction for peptones. Taking for granted that the mincing and washing may result in absolute exsanguination, that the extraction of fats may be complete, and that all dif-

fusible proteids may be removed by the boiling, we still have in the organ extract the proteid constituents of the glia cells, of the cell bodies of the connective tissue of the perivascular spaces, and of the endothelial cells and muscle cells of the blood vascular network, any of which, theoretically at least, might prove a source of error in positive reactions.

Still further, many organs, especially those of internal secretion, contain tissues of decidedly difficult structural type and presumably also of functional difference. So far, for instance, no results have been reported where differentiation has been attempted between the anterior and posterior lobes of the pituitary. Pancreas extracts must be considered as containing albumins characteristic of the cells governing both the internal and external secretions. Similarly, testicle extracts must contain material from the cells of procreative type as well as that from the interstitial cells of Leydig.

To review the situation, then, we find that many defense enzymes are reported in cases of organic psychoses which are not found in normal controls, or in any number in the strictly functional psychoses. In the great majority of dementia præcox cases the ferments reported are those against brain or the sex glands, or the two combined. When sex-gland reactions occur, they follow a strict sex-specificity; *i. e.*, male sera react to testicular extracts, but not to ovarian, and *vice versa*. In a smaller number of cases of dementia præcox, thyroid disfunction, either by itself or associated with brain and sex gland, is recorded. Cases do occur, however, in considerable numbers in which these so-called characteristic reactions are lacking; and the same reactions have been found in other psychoses, notably general paralysis and, by one investigator, in idiots. This in itself is, I think, sufficient to preclude considering the test at present as of great value as a diagnostic means until further refinements of technique or larger series of carefully studied cases have been reported. The application at present to border-line cases, for the purpose of diagnosis or the altering of clinical diagnosis on the ground of serological findings, seems unjustifiable, as the clinical study of the case must as yet be considered the means of control of the specificity of the reaction. Further studies should include, also, better classification of cases than simply dementia præcox, and preferably short ab-

stracts of the clinical features of the case. The results of one or two investigators seem to indicate that variations may occur in different stages of the disease; *i. e.*, negative reactions in terminal cases and differences between the various types.

Even if we accept the theory and the results of the most hopeful investigators, we are only brought to the beginning of a wider field of investigation, as by the interpretation of the theory the results speak only for a faulty metabolism in specific organs and as yet give no light on the underlying causes; *i. e.*, the fact that the metabolism of the testicle and brain are disturbed gives no insight into the cause of such disturbance.

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## EPILEPTIC DEMENTIA.

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Epilepsy may be associated with all forms of mental disturbances. It is met with in the course of functional or organic psychoses. During the evolution of symptoms of paresis, paranoia, dementia præcox, manic-depressive insanity epileptic seizures may occur. A temporary or transient mental manifestation, such as hallucination or a stuporous or delirious state, may precede or follow epileptic seizures. It may also take the place of an epileptic attack and become an equivalent of the latter.

We will not be concerned with all these occurrences, but exclusively with the close connection between epilepsy and quantitative diminution of intellect, viz., dementia. Quantitative diminution of intellect, viz., dementia, may also be met with alongside of epilepsy. There we find all varieties. The dementia may have existed before the epilepsy, or both conditions developed simultaneously after a cranial traumatism, or the dementia and epilepsy are both the result of some cerebral lesion, or finally the dementia developed some time later after the onset of epilepsy.

The first variety belongs to the class of idiots and imbeciles. There are usually material causes for both conditions such as encephalitis, hydrocephalus, meningitis, cerebral hypoplasia or hyperplasia and other malformations of the central nervous system. In these cases the mental development had been arrested in early childhood. The individuals are either idiots or imbeciles and they are commonly affected with epileptic attacks. In such cases epilepsy merely accompanies the intellectual deficit, but there is not necessarily a direct relation between the two as cause and effect. The cerebral lesion or malformation interfered with the development of the highest centers, hence the mental arrest, and at the same time served as an irritating factor to the cerebral tissue, hence the epilepsy.

In the second variety, in which there is a history of trauma, epilepsy may appear months or years after the cranial traumatism. The cerebral lesion produced by the latter determines the epilepsy. The dementia may appear simultaneously with the epilepsy and in some cases the dementia precedes the epilepsy. Here again there may be no direct relationship between the two conditions. The trauma and the material lesion of the brain are the individual causes of both.

Not only in cases of traumatism but also in lesions of the brain from other causes, in chronic meningo-encephalitis for example, epilepsy and dementia may accompany each other without direct relationship between the two.

Let us consider now the cases in which dementia is the direct result of epilepsy. They constitute genuine cases of epileptic dementia. This study embraces eight patients who have been kept under observation for a period of twelve years and in which the dementia developed subsequently to a more or less prolonged period of epileptic seizures. The patients of these series presented the following peculiarities as to the period of life at which the disturbances made their appearance.

Five individuals developed epilepsy at the age of puberty, one at 27 years of age, one at 37 and one at 62. The last two patients began to show symptoms of dementia early in the course of their epileptic seizures. In the other six patients signs of mental enfeeblement were observed three or five years after the onset of epilepsy. With the exception of the woman aged 62, who began to show symptoms of dementia four months after the onset of epilepsy, in all the other patients the mental enfeeblement made its first appearance when the epileptic seizures became very frequent. As to the ages at which both morbid conditions appeared, they are seen in the following table:

Patients.	Age of the Onset of Epilepsy.	Age of the Onset of Dementia.
1 (girl) .....	15	17
2 (girl) .....	15	17
3 (girl) .....	16 years 5 months	20
4 (girl) .....	16 years 3 months	20
5 (boy) .....	16	19
6 (man) .....	27	31
7 (man) .....	37	40
8 (woman) .....	62	62 years 4 months

It was interesting to observe that the adolescent group of patients reminded in some respects the clinical picture of dementia præcox. We find here apathy, indolence, some vague delusional ideas and in some cases catatonic attitudes. These are the manifestations in which resemblance existed. But it is also interesting to note that while in dementia præcox the anterior intellectual acquisitions disappear as a rule quite rapidly, in cases of my series in which the dementia was associated with and dependent on epilepsy the diminution of memory for already acquired knowledge was very gradual.

Constitutional diseases, such as tuberculosis, diabetes, etc., were all observed in the histories of the entire series of my patients. Syphilis could equally be excluded as a Wassermann test on the blood serum, and cerebrospinal fluid as well as Noguchi test proved negative in every one of the patients.

Alcoholism was present in the man aged 37. He commenced to drink at the age of 30. Quite considerable quantities of alcohol were consumed by him. However, he never presented alcoholic delirium or any other mental disturbances. His epileptic condition developed at the age of 37 following an alcoholic debauch. At first the seizures were frequent, but at the end of six months they became rare. At 39 the seizures became again frequent and occurred once about every week or every two weeks. It is interesting to note that from the time epilepsy developed the patient did not resume the use of alcohol except on two occasions at a year's interval, when he drank very moderately (2 or 3 drinks of whiskey in one week). At the age of 40 symptoms of mental enfeeblement commenced to become manifest. Memory, attention, power of concentration, initiative and finally judgment—all these faculties underwent gradual diminution. The interesting feature about this case is that alcohol cannot be directly incriminated as the cause of the mental disturbances. It is the epilepsy which is closely and chronologically associated with the dementia. Nevertheless, there is a previous history of alcoholism which may have prepared the individual to the mental disorder and the epileptic seizures served as a reinforcement.

The woman of 62 presented physical symptoms of marked senility. Arcus senilis, arteriosclerosis of the most pronounced type, high blood pressure, almost musical accentuation of the

second aortic sound, presbyopia, are the manifestations observed in this individual. Without an apparent exciting cause she developed epileptic seizures of the usual type. At first rare, they soon became frequent so that during the third month they occurred twice a week. Four months later the patient began to show signs of pathological mental senility. Actual diminution of sustained attention, weakness of memory, a certain childishness in acting and feeling—soon became manifest. In this case the oncoming physiological senility undoubtedly had a predisposing influence on the development of dementia which made its appearance *apropos* of repeated cortical irritation caused by the epilepsy.

It is evident that in the last two cases there are elements that may have played a certain rôle in the causation of the dementia and the epilepsy could be considered both as an exciting and direct factor. Such unfavorable elements are entirely absent in the six other patients. Here the mental enfeeblement appears to be the direct consequence of the epilepsy. It is interesting to note that the younger the individual, the earlier signs of mental disturbance would make their appearance. It is also important to know that in all the six patients, while there are no personal medical antecedents of any moment, nevertheless their family histories present certain features which point to a neuropathic heredity. In the two girls of 15 there is a history of alcoholism in the parents. The girl of 15 years 5 months had a sister who was confined to an asylum. The families of the other four patients presented some mental abnormalities which it was very difficult to determine with accuracy. The younger individuals, including the man of 27, grew up to all appearances normally, when at their respective ages epilepsy developed. The two girls of 15 had at first attacks of petit mal exclusively, but soon major attacks supervened. The other patients commenced their epilepsy with seizures of grand mal. All the six young patients as well as the last two older individuals presented major seizures exclusively at the time the symptoms of mental enfeeblement began to appear. As to the character of the epileptic attacks, they were all of the generalized type. In none of them unilaterality of the convulsions was observed.

Let us consider now the chief features of the dementia as they appeared in my eight patients. The clinical pictures differed in the younger and in the older individuals. In the first group, as it

was intimated above, the resemblance to dementia præcox is striking. The absence of any mental abnormalities in the lives of this group of patients prior to the onset of epilepsy excludes at once any possible influence on the mental enfeeblement other than the epilepsy. It seems there was a direct relationship between the two disorders.

The similarity to dementia præcox was more than ordinary. We find here involvement of the affectivity, of judgment, diminution of memory for recent and old events, feebleness of comprehension and concentration. In every one of them could be observed delusional conceptions of a transitory character; also hallucinatory images. In spite of this striking similarity between these two affections, there was one feature which remained so conspicuous and so persistent that it appealed as a diagnostic indication in differentiation of both diseases. It consisted of the preservation to a large degree and for a long time of the previous intellectual accomplishments acquired prior to the onset of epilepsy. The youngest of my patients was 15 years of age; the knowledge obtained up to that age was quite considerable. In spite of the gradual oncoming of other symptoms of dementia and in spite of the inability of acquiring and assimilating new facts, the memory for already acquired data remained intact for a long time. Their diminution and disappearance was exceedingly gradual and insidious—a condition which is not observed in dementia præcox. In the latter affection intellectual acquisitions usually disappear quite rapidly.

This special feature which appeals to me as being characteristic was particularly noticeable in the men of 27 and of 37. Here the retention of the anteriorly acquired knowledge persisted with greater integrity and for a more prolonged period than in the much younger individuals. It must be mentioned, however, that in all those individuals the preservation of facts concerning previously acquired knowledge was more in a quantitative than in a qualitative sense of the term. When the faculties of judgment, of discrimination, began to fail, the power of criticism commenced to suffer. The patients, while able to recall important data, showed at the same time lack of their full appreciation and weakness in criticising them. This condition existed throughout the entire period of the gradual decrease in the mental power.



The two patients of 27 and 37 years of age presented in addition to the last-mentioned characteristics also some features of paresis. The speech, while not entirely typical of the latter, nevertheless reminded at times of a paretic speech. The facies, the attitude, the occasional syllabic manner of speaking, the fine tremor of the hands, together with the frequent attacks of epilepsy—all rendered the dementia of my two patients strongly similar to paretic dementia. However, an analysis of the cerebrospinal fluid showed absence of lymphocytosis and negative both Wassermann and Noguchi reactions, all facts which exclude at once the diagnosis of paresis.

The last patient of my entire series, the woman of 62, presented as a special feature symptoms resembling those of senile dementia. In fact, at first glance no other condition could be thought of, and were it not for the underlying characteristics of the so-called epileptic character of the individual, the patient could have been considered as suffering from pathological senility. But in view of the fact that the former normal mentality became abnormal shortly after the onset of epilepsy, and in view of the above-mentioned characteristics, the dementia must be directly associated with the epilepsy.

Apart from the special features characteristic of the separated groups of my cases as considered above and in spite of these fundamental differences, a particular set of characteristics could be found common to all the patients of my series. They were: undue irritability, leading at times to brutal acts; outbursts of passion, anger and impulsiveness; hostility; distrust; loss of affective faculties; perversion of moral sense; egotism; extreme sensitiveness; mysticism. These characteristics constitute a very important set of phenomena, which were so uniformly observed in all my cases that they could be considered typical of epilepsy. They served as a diagnostic guide in the process of analyzing the mental attitude of my patients and in determining the direct relationship between the psychic manifestations and the epilepsy itself. They helped to establish the fact that while some symptoms of dementia præcox, of paretic dementia and of senile dementia were present, nevertheless, there was merely a resemblance to these psychoses. The above-mentioned characteristics carefully studied and observed throughout a long period of time enabled me to make a

sufficiently distinct differentiation between those maladies and the mentality of my patients.

The conclusions which the above observations permit to draw are as follows:

1. Normal intellectual faculties may coexist with epilepsy, provided the latter is not frequent.
2. Should epilepsy become frequent, it eventually exercises a destructive influence on the mind. The latter consists of retrogression of intellectual power, viz., a gradual, progressive feebleness of intellect, leading to dementia.
3. Epileptic dementia may develop at any age.
4. Should epilepsy appear at the age of adolescence, the dementia assumes the clinical picture of dementia præcox.
5. When epilepsy develops in an adult, the dementia may resemble that of paresis.
6. If an elderly person suffers from epileptic seizures, his mental condition may simulate senile dementia.
7. A thorough analysis of all such cases will reveal the fact that the resemblance to the above diseases is not a profound one; the individual characteristics of epileptics which are invariably present will soon enable one to ascertain the true nature of epileptic dementia.
8. The majority of epileptic demented present family antecedents of a neuropathic nature.



## THE TRANSLATION OF SYMPTOMS INTO THEIR MECHANISM.

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The foundation of the concept that all our conduct and utterance, whether considered normal or abnormal, is based on underlying subconscious trends of direction, is comparatively modern, particularly in its clinical application. The literature on psychoanalytical investigation is quite ample and the case-records sufficiently convincing to warrant our earnest attention.

In this paper I do not attempt to add cases adducing new and positive testimony to the value of psycho-analysis, but rather to accept as axiomatic that the "why" of a person's conduct and utterance depends upon the "because" of underlying complexes, all linked in many ways with each other, and thus reaching back into early infantile psychic beginnings as continuously and surely as the progress of the lifetime itself.

Assuming then that the everyday life of the adult is dependent upon subconscious complexes of affect value, the dynamic value of which is determined largely in the infantile period, it seemed to me worth our while to determine by similar methods just what complexes were of most significant value in our patients' lives. The main trend of all our lives shaped from infantile ruminations, developing upon the soil of individual personality with its possibilities of neuropathic non-resistance and further subject to the strains of environment, must after all finally center toward some one great wish above all others. Almost invariably this seems to be found more or less closely associated with our sexual longings. If the wish is unattainable, we may bury it in the subconscious (where lie also those things we dare not face) and yet utilize the affect value in work for the world; or we may meet the facts frankly and consciously and attain the wish at any cost; or again

we may be unable longer to bear the facts of life as they are and so retreat into a psychosis.

The analysis of cases from this latter group reveals the unknown affect complex which precipitated the essential conflict of the patient's life.

L. E. D. No. 74423.

*Family History.*—Complete for three generations. Maternal grandmother epileptic. Mother epileptic. One maternal uncle arteriosclerotic; died of apoplexy. Father neurasthenic type.

*Personal History.*—Born in New York State in 1880; early childhood uneventful; no convulsions. Graduated from normal school; learned easily and was never left back in classes. Make up quantitatively normal; qualitatively was never very social in tendency, but later was forced to be so as a clergyman's wife; was always sensitive and worrisome, but seemed to be aggressive and did not drift much. No particular change in character after puberty and seemed normal up to time of marriage in 1905. She never had any children and no miscarriages. Had rather high ideals as to care of children and said she would never bring any into the world until she had the means of bringing them up as they ought to be. After marriage it was noticed that she would worry over small matters and if anyone in her husband's congregation acted indifferently she would refer it back to herself in some way. Before marriage her husband had known a Miss Hazard and patient always seemed jealous of this woman. On one occasion made a scene over her because her husband had arranged to have her appear on a programme. This woman appeared only once or twice in the patient's life, and apparently in quite an incidental way, but she always seemed to irritate her. She began to nag her husband more and more and for this reason he gave up pastoral work and moved to a farm. There the patient worked hard and not being associated with other people seemed to get along better. Finally they moved to a small town in 1911, where she had a horse and carriage and drove a great deal and some young men commented upon this. A Mr. Donovan worked in a store where she traded and she thought people made remarks concerning him and herself. In June, 1913, she rather suddenly became very unreasonable; would not allow her husband to light a fire and said, "If you do I will put it out." Began to talk about black and white influencing her; became angry over little things, and at last accused her husband of infidelity, and later, quite unreasonably, wanted him to take a trip to Syracuse, and when he refused to do this she took an axe and followed him around the yard with it. For these reasons she was committed.

On admission to Kings Park State Hospital March 31, 1914: Physically, neurologically negative. Mentally, quiet, compliant, spontaneous production normal in amount. Replies to questions relevant and coherent. General mental attitude consisted of a feeling that she had been talked about in an improper way, but accepted the situation pretty well and was fairly complaisant. Mood is one of mild depression with a feeling of dissatisfac-

tion. Delusions of a persecutory type. Said, "I think I am as notorious as Harry Thaw. I have so much on my mind; I don't know what to say. When we went to Melville to live—two years ago—it commenced. One day I went to the village with my husband and while I sat in the wagon this young man came to the door and I bowed to him; he made motions as though he wanted to be intimate with me; I thought a great deal about him. I thought he wanted to see what kind of woman I was." She found that people knew all about her through the newspapers and pictures and by the day of the week on which they called on her, each day having a special meaning and lending color to their visits. Hallucinations were not demonstrable. Orientation and general mental organization intact. No gross deterioration. Insight partial, realizes the peculiarity of her ideas to some extent, but does not grasp their real significance.

Asked to make free associations, she showed that all her present ideas were related by direct association to a conflict which was based primarily upon the fact that she had never had her wish for children gratified and that she viewed her husband in the light of a man who was not prepossessing physically and who did not support her very well financially, and therefore was a person not particularly acceptable to her. Secondarily to this appears Mr. Donovan as the man whom she desired. She seems to have progressed quite normally through puberty and young adult life. After graduating she was an efficient school teacher, but after marrying her husband things began to go badly. He did not get along well in his church work and consequently they were financially unable to have children. She was jealous of Miss Hazard, whom her husband had taken out in a boat on one occasion previous to his marriage with the patient, and she said, "I carry that on my mind all the time." After her husband's failure as a minister they took up farm life and there she met Mr. Donovan in a store. On one occasion she asked in the store for lard and there was a great deal made over that by the other people. "This was because *lard* referred back to the last syllable of the name Hazard." The people thought that her asking for this lard referred to this girl. "They thought that I wanted her; that she was my daughter and I wanted her. They thought I was in a hurry. Hurry means Her-ry; another meaning, it was passive and I was working and selling things for my daughter." People whistled at the patient. "Whistling was masculine possessive—that brought me out of the hurry I have been in for so long. The whistling meant act—act

in character—act, that refers to act in action—*I was lonesome*. I thought maybe (Donovan) could give me something that might make me feel better—act—I told him I didn't want my character hurt—Away back to the time when I had typhoid fever (age of 13) boy was white and girl was black—they thought because the little white—man was my character, I wanted him because I kept on trading there—I had a *vaginal* discharge—the whites, I haven't had it since.—*I liked White*.” (White was the name she gave to the man in the store.) Later said, “The people wanted to get something on my mind—a boy off my mind—white represents a boy and the girl is black. They thought they would get something on my mind. What was on my mind was that *I wanted a baby*. I told the doctor I didn't feel like opening my mouth so my husband went and told what I wanted—later the trees had been cut from our farm—they thought I didn't like so much sun—that refers to son—because I was *hot*. That refers back to *sexual things*—back to the time when I had typhoid fever—you know how hot and feverish you are when you have that—Later people seemed to think that I had my *husband* on the *left* and an animal or a billy goat on the right—that means *big* to my right and *little* on my left. This young man was the billy goat. Now I am risen on the right and down on the left—I have risen on the left and now I am quite smart—the clipping in the paper was a little verse about ‘Willie, Willie in a long tailed coat’—that makes me think of billy goat—they thought I had a young man on my mind—billy goat is the young man in the store.” White is associated with a vaginal discharge which she had and she says “I always had a scent about me. *Scent* or cent—now they have taken that away from me—I have never wanted to work. I wanted to live in ease and luxury and have lots of love. I always did want lots of love and I want it yet—I had always been young and sweet—I regret that I am old and have an old man on my mind. The whistle (she heard) meant that it was the possessive—the man possessive—the man possessed me and I possessed him. I would have been satisfied with my husband if we had had children.”

*Dreams*: “I saw the sky and then a large building—it looked like the Capitol of Washington. On the dome in large letters was the word *Perfection*.” Analysis shows that Capitol refers to Mr. *Cappelle*. Washington to George—George Capelle. This re-

fers back to George Allen, who is associated in the patient's mind with Mr. Donovan, the young man in the store, because he looked like George Allen. The word "perfection" means "perfection at last, we will all get it." (What we want.)

It is found also that the patient's unexplained desire to make a trip to Syracuse was because this town was much nearer to Mr. Donovan than Brooklyn. She apparently wished her husband to accompany her in order to cloak the underlying subconscious wish to get nearer the man she wanted and to make the trip appear quite conventional. There are many other associations in this case, but they all lead back to the primary conflict in her life. Superficially she presents simply the appearance of an ordinary case of dementia præcox, paranoid form, with a number of odd utterances which are quite incoherent and irrelevant on the surface, but upon analysis show continuous associations leading back to her desire for a child and dissatisfaction with her husband.

A. M., No. 72026.

*Family History.*—Complete for three generations. Sister and brother insane. One other brother alcoholic.

*Personal History.*—Born in Norway, 1889; school record average, but did not thoroughly grasp subjects taught; ability for calculation above elementary exercises limited; mental dexterity normal; always seclusive, but still inclined to be fairly sociable. She came to America when 20 years of age; married and was a good housekeeper. She and her husband were purchasing a house on the instalment plan; his habits were good and on the surface everything seemed comfortable in their married life. In August, 1913, three months previous to admission to Kings Park State Hospital, rather suddenly one night she began to talk peculiarly, saying, "I don't know what is the matter with my father and mother—they have tried to hang themselves." (They were in Norway.) A few days later she got up in the night and said she was dying, became apprehensive, made contradictory statements and on a later night the husband found her looking at him while in bed and she told him she thought he was dying. Following this, she imagined that everyone was down on her, stated that she felt afraid to stay alone in the house and felt impelled to rush out into the open air.

On admission to Kings Park State Hospital November 1, 1913: Physically, was neurologically negative except for complaints of feeling of pins and needles in her back and a feeling of stiffness. Mentally, she was quiet and compliant. Stream of thought was relevant and coherent without formal disorder, but she discussed her case in an unsatisfactory way; denied hallucinations, but said she dreamed that all her family were going to be killed. Her attitude seemed rather apprehensive and she complained



of a peculiar feeling in her throat which she described as a feeling of electricity, and *when she feels this sensation she imagines that her husband is dead*. Emotional tone was shallow, but there was a fairly natural affect; several times became emotional and shed tears. Asked to write, *wrote her maiden name* and when reminded of the mistake became embarrassed. Her personality seemed to have suffered a slump, became untidy and careless in her appearance and destroyed articles of clothing. She ceased worrying over her husband, never mentioned her baby and spoke of going home only in any offhand way. Finally in this condition she was deported to Norway.

Probing and free associations brought out the following conflict which was apparently the rock upon which her life made shipwreck: As a child she seemed to get along in an average way, but found that what she learned did not stick very well and she was inclined to drift. She got along very well with her brothers and sisters, but never confided in them particularly and although she liked to go out with companions as a young girl, yet kept her own affairs to herself. When she was about 16 she had her first lover. Said, "I had a fellow in Norway before this fellow I married. I went with the first fellow a year. I had no room to take him in as my bed was in the kitchen where the rest of the family slept; he always wanted to get me alone, but I would always take my girl friend with me. When he came to this country (the man left her in Norway and came to America) his face was all scratched up and I would not go down to the boat to see him off and after that he never wrote me any letters. That was in 1906. I came to this country in February, 1907, and married my man after only three days knowing him. I had been with him a couple of times and later I thought I was in the family way by him. *I would not have married him if I had not been in the family way by him*. My brother's wife saw my first fellow and he came to the house, but she would not tell me because I was going with Charlie (husband). In 1910, after I was married, I went home to Norway and there I saw the first fellow. He talked like a fool—said he was going to drink and jump in the water (for love of the patient)—said he had a girl in the family way then and she had no home—and I told him to marry her and he did—I felt kind of bad when I seen him."

After the patient returned to the United States the second time from her visit to Norway she had given up her lover, as she had

told him to marry another girl, but she always thought about him a great deal and always with a certain amount of longing. Essentially it seemed that he was the man whom she wanted for marriage (her wish), and after this affair was broken off because she would not go out with him when he wanted coitus, she wrote him letters which he did not answer and then she came to the United States, and began to have intercourse with Charlie (her husband), but she says she would *not* have married him if she had not become accidentally pregnant by him; then a miscarriage was induced (but she did not worry over this as it was a *desired* thing). She married and a child was born in October, 1909, and died 18 months later of spinal meningitis. A second child was born in November, 1912, and the patient was glad to have this baby, so she said, and was all right mentally until she went to live in the country about June, 1913. There she was alone a good deal while her husband commuted to the city. Strange ideas began to come to her "that everybody was dead." She saw a cartoon in the paper and thought the figure was that of her father and interpreted it as being that her father was in jail. She had a fear of the inside of the house and wanted to be on the *outside*, which is explained on analysis by the fact that when she *lost* the first baby the doctor told her to be on the outside (out of doors) as much as possible. Then when her second child came along by the undesired husband and forged another link to bind her to him, she developed a fear of being in the house. She *wants* to be under the same circumstances as she was when the first child *died*. She *wants* to be outdoors as that *symbolizes freedom* to her in relation to her undesired husband. On the surface, she worried because her husband commuted to New York and thought this was a terrible distance and was afraid he might be killed by the cars, this evidently being a defense reaction to ideas that she wished to be rid of him (such ideas not being acceptable to her personality).

The symptoms of this case, from a purely formal standpoint, show odd thoughts and actions with gradual deterioration of the mental organization and dilapidation of the personality. When the facts of the patient's life are carefully investigated and free associations are made, it is seen that all her peculiar utterances and eccentric acts refer back to a strong, central affective complex; the old wished-for lover and the unsatisfied longing for him in

conflict with her present situation, in which she finds herself married to a man whom she had taken merely for conventional reasons to cover her quite incidental illegitimate pregnancy.

B. E. P., No. 73810.

*Family History.*—Complete for three generations. One maternal uncle seemed bright, but was a loafer and sponged on his family. Mother nervous disposition; worried over small things, but was easy going in larger matters.

*Personal History.*—Born in New York, 1890; early life entirely uneventful; seemed a perfectly normal child and began school at six and attended high school, but did not graduate. She was ordinarily intelligent, seemed interested in her work, liked to draw, but did not apply herself very well, and was left back in her classes a couple of times. Make up seemed quantitatively normal; qualitatively was easy going; always seemed ready to mingle with other people; was bright and jolly, but was never very much attracted by men or boys and had more girl friends than men friends. She associated with no one particular friend (girl) however. After puberty her disposition did not seem to change and even when she began to meet men more concretely later she did not seem to change particularly. After leaving school she stayed home and did the housework for a while, but never did very much and never seemed to go ahead and plan things, but what she did do seemed to be done well. As she approached the age of 20 she went outside to work and assisted with clerical work in an insurance office, where she appeared to be satisfactory, but was let go with a number of other girls when the office force was reduced and then took a position as a telephone operator. Her work was well done and she stopped working only two weeks previous to admission to Kings Park State Hospital. In December, 1913, while working in the telephone office, she began to have queer thoughts, which seemed to come on rather suddenly. She told her brother about these thoughts and wanted to know if that was the way you felt when you were in love, but did not give any definite information until a month later, when she said to him, "I am not just right; I have had peculiar feelings; there is a certain young man that I have been having some thoughts about. I feel depressed. When his face is flushed, my face is also. One day when I was in the hall a girl said to me, 'That man is nice; why don't you see what you can do about getting him?' Tell me, am I in love? Is that the way you feel?" Two days after this interview she stopped work, went home and conducted herself in an orderly fashion, but seemed preoccupied and walked up and down a great deal. A week later she became rather uncommunicative with her family and seemed sullen and ungracious when they spoke to her. Finally said, "There is something the matter with my head and I want to have it cleared up; my folks are watching me and won't let me out alone." She then made voluntary application for treatment and was admitted to Kings Park State Hospital February 11, 1914.

On Admission: States that she felt nervous and depressed without known reason; that her ears rang and at times she hears voices; peculiar

thoughts come into her mind unbidden and exert a great influence over her conduct. Physically, complained of numbness in her hands and feet; otherwise neurologically negative. Mentally, general behavior was quiet, compliant and accessible. Inclined to be a little suspicious, but made a rather favorable impression on the whole. Stream of mental activity showed answers to questions relevant and coherent. Spontaneous production was normal in amount and content. Her mood was one of mild anxiety over her condition, but little real depression or tension. She could smile readily, yet at the same time did not appear particularly happy. At times was inclined to be a little impatient with those around her; emotional tone seems intact. Her trends were along lines of influence. She thinks she has been forced to move when a certain man came around and has been forced to think all sorts of thoughts, many on sexual lines, associated with visions. Immoral ideas have been intruded upon her. Thought a man in the office where she worked put her in a trance every time he came near her and that he controlled her movements. Visual hallucinations had occurred; she had heard distinct voices; also had smelled chloroform while in bed and tasted peculiar things in the food. Purely mental functions, such as orientation, memory and general grasp, were intact. She gave the impression of a person who recognized that her ideas were abnormal, and yet because of their intensity and the emotions that went with them had been unable to convince herself that they were entirely unusual, and in that sense clings to them, although asking for treatment.

An attempt to get at the underlying complexes in this case reveals the following:

As a child she seemed to have shown little out of the ordinary; she did not block or show marked resistance at any one point of her whole life and seemed to have developed along fairly normal lines without any very definite introversion. As she was approaching the age of 20 a young man attempted sexual intercourse with her, but she did not let him accomplish this, however. She did not seem to worry very much and in fact went calmly to bed afterwards and complained simply that she felt a little nervous and restless that night and could not sleep well. After that she went ahead with her usual plans and only when she fell in love with a man whom *she actually wished to have* and he did *not* propose did she begin to ruminate over the situation; sees his nude body exposed; feels like proposing to him; hears his voice in endearing terms and was conscious that she would be willing to do anything for him that he wanted her to, whether she were married to him or not.

Excerpts of her statements on free association show the following:

I knew a young man; I was very fond of him and I thought he liked me. I had never had any actual sexual experience with men. At home I grew up with my brothers and sisters and we seemed to learn about these things quite naturally. Of course I saw pictures and statues and knew there was a difference (between men and women), but I never thought much about it. When I was 20 I was up in the Catskills and one time a young man attempted improper conduct with me and I repulsed him. I was always able to take care of myself, anyway; I didn't sleep much that night, but it didn't affect me except that it made me feel a distrust for men and I thought they only wanted you for one thing. I had no special ideal of men. I was working in an office as telephone operator; there were other men there and this young man I liked worked there. Christmas night (1913) I had felt very happy that day. I went to bed about 10 o'clock, then a lot of thoughts came in upon me; I thought I noticed that I felt compelled to say things to other people, like the people I was making out policies for in the office. This feeling came like a thought that would sound in my head like a voice. This voice came particularly when this man was in front of me; it seemed as though he were putting thoughts into my head—thoughts of him in relation to love and marriage and all that went with them, and later, incidental thoughts, such as go and get a drink of water—it seemed to me as though I felt that love were taking my senses away from me. This trance voice sometimes told me to do improper things to others. I began to mistrust the men in the office and felt that some of them had designs on me to make me bad. That Christmas I saw some visions—pictures of men in exposed conditions. I saw them in the daytime, right in the office and thought they were at the side of me. I also at such times heard a very distinct voice which just wanted to embarrass and bother me. I saw my lover in the vision—he exposed himself—I would be frightened and that's the way I knew something was the matter with me. I have had all the sensations that go with love; these happened when I was home in bed. I was sleeping with another person in reality, but he seemed to be near me just in spirit, but I had all the feelings. I had feelings that shot through me once, for two days in the office, they seemed like vibrations, perhaps more like electricity, all through my body. (They struck her sexual organs, but did not originate there.) I felt a fear and thought he was coming after me. This happened one day about the 1st of January, when I was at lunch with him. I answered his voice which asked for me and said, but not out loud, "you can't have me." I liked him and it seemed strange that I should say that he couldn't have me, because I had always been ready to do anything for him if he had asked me, whether we were married or not. He knew that I liked him, but he never tried to do anything detrimental to me in reality; but when I heard his voice or saw these things, he could have done anything with me. I had no distaste for him; there were lots of other little things. I liked purple and always wore a purple dress and one day he wore a purple tie and when I saw it I said, "When you are through with that tie, you can give it to me." I don't know what made me say that. (Disguised expres-

sion of subconscious fetichism.) One day I was conversing with him and he said he didn't have enough money to get married on—I don't just know how the subject was brought up—and so he couldn't ask anyone to marry him, and I felt like saying, "*I feel like asking you to marry me.*" (Projection of the wish in the form of conscious impulse which was restrained in this instance.)

This case represents essentially a badly managed situation in which the wish fulfilment could not be brought about in reality and the psychosis developed as a substituted reaction, characterized by symptoms representing the projection of internal ruminations. Whether readjustment is entirely possible is questionable, but the reason for her peculiar conduct is at least thus explained.

H. E. R., No. 40202.

*Family History.*—Complete for three generations. Mother insane; father very religious.

*Personal History.*—Born in Ohio in 1864; made the usual progress at school. Make up quantitatively normal; fond of entertainment, but worried rather easily. At the age of 19 married a printer and seemed an efficient housewife. At about the age of 33 she suffered a depression which was brought on by so-called domestic trouble and developed ideas of persecution. She became resistive, was mute and required tube-feeding and was treated in a sanitarium for three months and then left unimproved. Two months later she was admitted to a state hospital, where she remained for about a year. While there talked loudly; showed delusions of a religious nature; talked of the Lord taking her speech away and became mute. She improved and appeared to abandon her delusions and was finally discharged after a residence of nine months. She remained at home for 11 years and her husband considered her quite well in this interval. Then rather suddenly she became excited and expressed ideas of a religious nature. She was again admitted to a state hospital in May, 1909, and remained there until September, 1911, when she was discharged improved. She remained out for about two years and then began to act queerly, but was able to remain at home, looking after her household duties to a certain extent. Six weeks before coming here she witnessed an operation on her nephew for adenoids which greatly upset her and she began to react to hallucinations; imagined that some one was telling her to get away, so she wandered from home. This caused her commitment.

On admission to Kings Park State Hospital, November 19, 1913: Physically, fine intention tremor of tongue and fingers; otherwise negative. Mentally, was apparently laboring under some pressure of speech and seemed elated, showing a tendency to elaborate her answers. Trends are not very well systematized and show ideas of persecution, with auditory hallucinations. She laughed a great deal, but again would show no emotion when discussing such things as the death of her mother. Thought she had been poisoned and expressed queer ideas about not having had earthly parents,

but having been placed on earth by God. She spoke about babies a great deal and of performing miracles. She continues to reside in the hospital unimproved.

On probing and after allowing the patient to make free associations and also by taking note of her spontaneous production for a considerable period of time, it is found that the affective factors in her life are as follows:

Her childhood seemed uneventful; she was always fond of entertainment and was greatly interested in her home life. Whether any change occurred at puberty we are unable to ascertain, and no definite period of introversion is demonstrable. She married a printer when fairly young and on the surface their married life seemed to be fairly successful. She never had any children. She brought out in her talk (referring to her husband) "that he was a poor (soft) fellow," then apparently to counterbalance this, consciously said, "to know him was to love him," and concerning his family said, "they were a lovable family, affectionate and loving; every Sunday they would sit down and sing a hymn before breakfast; loving and true and generous." Concerning children, said, "I would have liked to have had children and I heard a voice say 'God will show them to you some day.'" She never had any children and said, "I know; I was told that some day God will show me the little ones that would have been born if I had not been meddled with." (Uterus was curetted at the time of her first admission to a state hospital.) She had felt worried and depressed previous to this operation in February, 1897, and following it seemed to become worse and developed her first psychosis. She followed her husband to business to satisfy herself that he was her husband (beginning of unreality complex), and soon after this made repeated attempts to drown herself in the bath tub; thought that her husband was not her husband but a spirit, and that God knew where her real husband was. Said "spiritual people put everything in my body and made it hard" (rubbing her abdomen—pregnancy complex). Thought the people around her were spirits; the nurses changed into her husband at times and the doctor knew all her thoughts.

The active psychosis subsided and after about 11 years developed again after having had a disagreement with a family who lived above them. She had had no children in the meantime and

again made attempts on her life. Said "my husband and I lived so happy, only that woman (the woman who lived above her) came into the house and took my insides out." Talked with the Lord and thought that her husband was not her real husband. This idea led back to a complex developed in the patient by the fact that her husband had been named as co-respondent in a divorce suit shortly before this time.

Her wish for children was still denied. Evidently she felt that she was fighting an irreparable situation, and, being unable to readjust herself with the facts, developed a psychosis in which the idea of wish fulfilment was plainly expressed. At the time of her admission to Kings Park State Hospital November, 1913, she presented a florid delusional picture, in which the predominant idea was that "she was the baby replenisher of the earth," and at the same time justified the peculiarities of this delusion by saying "people followed and abused me all my life since I was a little baby—since God put me on earth—I was good, a little capable, they saw the spirit in me—I have an idea that it is nationalities, at times Irish. They didn't understand to be quiet and not to interfere with people. Little voices (baby) come from purgatory, God's voice speaking to His baby replenisher."

The psychosis advanced to the point where she lost contact with reality to a considerable extent, as shown by her ideas and also by her attitude. She now has found the fulfilment of her wish in partnership with God's plans. He tells her "I will never leave you, baby replenisher—my husband (who was unable to impregnate her) has taken on a new house and the woman who was supposed to live there was named Jesus Christ. I was next door—I thought I would never room with my husband again (she refused coitus with him on account of his supposed infidelity)—you know what I mean and a little voice said 'you are to be God's baby replenisher'—I have had no intercourse with my husband since I was taken away four years ago. I never suspected my husband until these bad times, when the women were paying money and grabbing things (referring to husband's supposed infidelity). I don't like to listen to this; it hardens the germ in me—little people that God gave me" (pregnancy complex).

The case illustrates a conflict involving sexual life and primitive instincts; wherein definite wishes were impossible of fulfil-



ment and the reaction took the form of a retreat into a psychosis, where the wish was fulfilled in a satisfactory manner, but with great dilapidation of the surface personality.

M. C., No. 72564.

*Family History.*—Complete for three generations; mother irritable.

*Personal History.*—Born in Russia in 1886 and came to the United States when 2 years old. Attended school from 7 to 14 years and afterwards learned stenography; record good; never left back in her classes and learned easily. Make up, quantitatively normal; qualitatively irritable, rather inclined to keep by herself, or was at least not at all aggressive about going out with others, but would let them go to parties without her. As a child she played well with other children, but was excitable and highstrung and quick to take offense. Efficient as a stenographer. Puberty at 12; she felt a little more inclined to stay in the house after that. Married at 20; had a child a year later with a normal puerperium. Married life happy for five years; then her husband's business required him to be out at night and she was left alone a great deal, which made her nervous and she did not like it. Her father had died in the summer of 1912 and after this she began to have bad dreams. In November, 1912, she ran out in her night dress and telephoned for her husband to come home. Then she began to have periods when she would throw herself on the floor and cry and act peculiarly. She would get one of these attacks if she worked, because she always worked as if under pressure and moved around very fast. She would not say much during the attack, but would weep loudly and afterwards always felt quite depressed and flat. She did not like her mother-in-law very much, but had no open trouble. About seven months later, in May, 1913, she developed indigestion, which grew worse; began to think she had a cancer in the stomach; did not want to eat, and about October 1, 1913, rather suddenly became listless without any very definite upsetting factor and *lost all interest in her home*. When actually asleep she would think that she had not slept. Attempted suicide and became angry because she was watched and asked to be killed. Then following that developed the idea that her body was dead, and was admitted to Kings Park State Hospital, December 1, 1913. There her general attitude showed depression, but she was passive and compliant; spontaneous production was normal in amount and her replies to questions were relevant and coherent; showed a little tension and some agitation. Trends were all along ideas of bodily change with a mood of despair, believing that she will never get well. She showed the beginning of loss of contact and unreality syndrome in that she did not seem capable of experiencing pain and pleasure as she formerly did and things appeared changed. Pleasure left her unaffected. She seemed rather suggestive and said, "I thought I had ulcer of the stomach; I used to get these pains and a woman told me her husband died of the same thing and that gave me a terrible shock. I tried to keep my mind off it, but I used to get frightened when I thought of it." Later, when a physician gave her a physical examination, she came to the conclusion

that everything about her was dead except her heart. This was because he turned round and whispered to her husband and said, "she will be in darkness (grave) in four months." There was a feeling like shocks of electricity in her genitals; this happened only recently. She has continued depressed and required tube-feeding. Emotional tone on the whole is intact and in accordance with her ideas, although she has become rather *indifferent to her child* and is able to discuss the fact that she could die and leave the baby to the care of the father without any extraordinary emotion and says, "what has to be, must be." Purely mental functions, such as orientation, grasp and the like, are intact.

On probing it is found that she seemed to be perfectly normal until puberty and then suffered a slight introversion with increased seclusiveness, which, however, did not prevent her from going ahead with her work in the world, finally marrying for conventional reasons. She has always been quite fond of her father. At the age of 15 she began to practise masturbation at the suggestion of a girl friend and practised the habit up to the time of her marriage. She performed it on herself up to the age of 18, when she began going with the man she married. He used to place his hand upon her genitals, following which she obtained the same sensation and did not masturbate after that, although permitting him to do it. She married about a year after that, but did not have any extraordinary affection for her husband, but accepted the marriage in a purely conventional way. However, she did not find sexual relations disgusting and in a general way it may be said that her sexual adaptation to these concrete factors was pretty good. There was, however, some friction with the mother-in-law and the patient felt that she did not entirely approve of her. She did not seem to be wholly satisfied with her husband, but justified this to herself by saying that she feared that she was not a satisfactory wife to him. Finally, the husband was away from home a good deal at night and when left alone patient said she felt nervous and *desired to masturbate*, but did not do it. The flight from the house in her night dress in one of these struggles against masturbation probably represented a flight from temptation not acceptable to the personality. For this reason she went to the neighbors to telephone for her husband to come home. She was troubled with bad dreams from which she often woke up with fright. Said of the dreams, "I was nothing but hearses and in one dream I saw a crowd and they said that a young

girl had died. I thought it was a woman, but I couldn't tell what she looked like—the people seemed to be saying it was a shame, she was so young and had to die. I seemed to be on the sidewalk looking at the hearses—my husband wasn't there."

It would appear that the dreamer was both an onlooker and the persona dramatis. Her burial symbolized a means of getting away from her husband and his family. Told to write her name and address, she began to write her *maiden name*. (Expression of subconscious affective complex in trivial ways.) She noticed the mistake as soon as she began and crossed the letters out and finished with her married name; remarked that *she thought it was odd she should do such a thing*. When asked to write her maiden name, showed much *resistance* and *refused* to do so. Later, developed marked unreality syndrome in which all things were changed; her husband does not care for her; her body is dead; her bowels do not move, etc. There were many ideas of unworthiness and self-renunciation which seemed to be an atonement mechanism. This caused intense pre-occupation at all times.

This case is not complete, but, in the light of psychoanalytic experience and the literature on the subject, there is pretty conclusive evidence that her husband was not the sort of man she desired, and associated with this was his family, which was also distasteful. There is here an unsatisfied wish fulfilment and the psychosis represents an attempt to get away from an undesired situation and explains why she could talk about leaving her baby (the child of the undesired husband) or her own expected death without much emotion, because all this agreed with the mechanism of a plan to get her wish. Superficially her mood is one of depression, but essentially is one of dissatisfaction. In view of the fact that the psychosis is dependent on her marriage, a situation hard to change in actual life, the outlook must be clouded and the question of final readjustment will depend, not only upon the patient's attitude, but the husband's acceptance of facts as they are and the willingness of both to alter them if necessary. Certainly she is laboring under a strong affective conflict and even in her conscious life she endeavors to repress the complex because it is not acceptable to her personality. "I am trying to forget these things." The feeling of cancer of the stomach was simply a convenient hook upon which to hang all her ruminations about death,

an incidental and acceptable idea to which was transferred the affect of the fundamental sex difficulty complex. Cancer and death symbolized a getting away from the man she did not want.

E. B., No. 72593.

*Family History.*—Complete for three generations. Paternal grandmother alcoholic. Maternal grandmother had epilepsy for three years at about the age of 61 following a blow on the head. Father alcoholic, immoral and thought to be of inferior type. One brother died of paralysis at the age of 16, type unknown; no trauma; onset sudden; bilateral, involving legs and sphincters; not accompanied by pain; died in three weeks after onset.

*Personal History.*—Born in Pennsylvania in 1890; instrumental delivery. Never had any convulsions or severe illnesses; made a good school record. Make up, quantitatively, normal; qualitatively, said to be sociable, but was stubborn and hard to control at home and later became wayward. After leaving school she lived with her parents on a farm. At the age of 16 they moved to New York, where she secured a position as telephone operator and was successful in it. She became infatuated with a coachman of a flashy type, who for four months called on her at her own home. Then the mother interfered, the daughter became enraged, bit her mother and decided to leave home and board with a friend of the family. It was after this move that she had illicit intercourse with the coachman, who refused to marry her, and she is believed to have practised perverted sexual acts with him. She continued these relations for four years and then became pregnant and an abortion was induced with resulting peritonitis. This was in the early part of 1911 (two and a half years before admission). Following the abortion, she went to live with her mother and did not see the coachman. He is supposed to have filled the patient's mind with many rumors concerning her family. Following her breaking off with the coachman, the patient masturbated almost continually. She became very irritable and quick tempered, but all the time was apparently a successful telephone operator. She developed a strong dislike for her mother and for a certain man who boarded with the family, and stated that this man was alienating the affections of her mother. She kept a diary in which she used obscene language and applied immoral names to her mother and accused her of illicit practices. She finally struck this man with a pitcher, which led to her commitment. Her predominating idea seemed to be "a wrong to be righted" and she wrote to the President of the United States and other noted men for this reason.

Admitted to Kings Park State Hospital December 12, 1913. Appeared depressed; did not eat or sleep well; wept frequently; stated that a man living at her house had some sort of influence over her and keeps her uncomfortable and unhappy; believes this man is intimate with her mother. While she was carrying a pitcher, he stepped into the kitchen and she immediately lost control of herself and struck him over the head with it. Said that this man and her mother have shattered her ideals of life and driven her to foolish actions.

Physically, well developed young woman; cold hands and feet; rectal fistula and infected umbilicus. Mentally, she was quiet, compliant, fairly accessible and showed no very odd reactions in her general behavior. Stream of talk was relevant and coherent. General mental attitude; a feeling of depression on account of her surroundings; has ideas of reference and a feeling of guilt. Admits living with this man for four years illicitly and having had an abortion performed. Said that this man told her tales concerning her mother; that she was not conducting herself in a proper way with the man boarder. Ascribes her outbursts of temper to injustice which has been done her and expresses resentment against the alienation of her mother's affections by this man. She has read a good deal and ruminated over rather abstract topics; lately the subject of eugenics has interested her a great deal and she has felt that she could never have healthy children, this again being a source of worry. Mental organization was intact; showed no memory gaps; orientation good; insight fair. Her personality was quite pleasant and she showed no compromising reactions for several days, and then quite suddenly attacked another patient absolutely without adequate cause, saying that she "did not like the ring of the other patient's laugh and that she would assault her so that she would not remember what she said." This she did and at the same time said, "now, maybe you will believe in God—call all your little ghosts around you to help you" (referring to ideas she had heard the other patient express). She said this patient's (Mrs. C.'s) talk reminded her of her brother's death. After that she got along very well for a couple of weeks, then attacked another patient, Mrs. J., threatening to kill her, saying, "last night she was trying to find out why I was here and it is none of her business." She quite calmly prepared to deliver an assault on Mrs. J., for which reason she was removed to another ward. Later she stated that Mrs. C. (the first patient whom she assaulted) used to look at her legs and from that she knew that she was reading her thoughts and that her look meant that she must overcome the ghost fear. About this time she became quite sure that she heard God's voice. "First a man's voice, then the gentle voice of God in contrast." After three months her interests had narrowed down and she constantly misinterpreted the actions of others. Feels that the doctors and others are unusually interested in her and displays affective reactions when certain names are mentioned to her, concerning whom she has elaborated along sexual lines. She cuts out pieces of poetry concerning the "Hidden Life," "Companionship," etc., showing a tendency to ruminate along vague abstract lines. She showed a good deal of blocking and marked amnesia for childhood experiences.

Free associations on the part of the patient bring out the following upon which her symptoms are based: There was evidently a good deal of conflict between the mother and father, the latter being alcoholic and immoral, which may have given the patient childish fancies of a disagreeable type. She said once that she

had always been more or less irritable. She has ruminated from an early age over sexual matters and sexual realizations. These fancies increased following the beginning of menstruation and she recognized that she was unusually well developed for a girl of her age and rather better looking than the average. She was sure of this by the time she reached 15 years. At this time she fell in love with the boarder in the house, Mr. D. C., but he did not reciprocate. Then met another man, the coachman, concerning whom she had a quarrel with her mother, at which time she developed an exaggerated sense of anger and left the house to become the common law wife of this coachman. (This probably was something in the nature of a compensatory reaction, as she felt that Mr. C. D., the man whom she loved, did not care for her at that time.) After several years the coachman wished her to become a prostitute on the street for him. She became thoroughly disillusioned and returned to her home. In the meantime Mr. D. C. had continued to hold his charm for her, but on her taking up her residence with her mother she found him in rather compromising situations with her mother, for instance, being in her bedroom, but stated that she never saw him in an actual adulterous act. The situation at once aroused the ancient affect complex, this being the man she loved, whom she could not attract and who never had seemed to want her. She still loved him, but at the same time hated him not only for his making love in the abstract to another woman, but this hatred was intensified because the other woman was her own mother. She became depressed, contemplated suicide, but desisted at the last moment because she was afraid of what she might find in the next world. Then, while she was torn by these conflicts, one night Mr. D. C. came into the room where she was and she said, "it was a case of either hitting him or of throwing my arms around his neck and—I hit him." Contemporaneously Mr. D. C. had been throwing up to her the intimacies she had practised with the coachman and called her a bad name (which she consciously attributes as the reason why she threatened him with violence).

The present upset seems to be largely in the nature of difficulty in making adequate adjustment to an intolerable and yet unchangeable situation. She felt that Mr. D. C. would never love her; that he had ruined her mother; that by her own foolishness with an-

other man she had lost her good looks and her prospect of marriage, and finally Mr. D. C., whom she loved (who was the person for her wish fulfilment), spurned her. She could now adjust herself to the situation no longer. It was for these reasons that, when little incidents, trifling in themselves, occurred, like Mr. D. C.'s coming into the room, she suddenly became assaultive and acted in a way seemingly out of proportion to the moment. But when the conflict is analyzed, it is seen that there was adequate reason for her conduct. Her ability to make further readjustment has been destroyed and as a result she sees meanings with personal reference in the acts of all people and shows a tendency to a vague scattered form of spontaneous thinking, speaking and writing, throughout which runs a sexual undercurrent. Recently wrote, "last night I had one of those wet dreams, result of going to bed too early, excess vitality in other words. I know you are shocked at me, but I can't tell these women doctors; it eats to the quick to talk about such things as that to one of your own sex."

J. C., No. 72048.

*Family History.*—Complete for three generations. Father alcoholic; sometimes talked queerly. Mother over-sensitive and nervous. One maternal cousin "over-active and destructive," was considered insane. One maternal uncle alcoholic. One sister died aged 3½ years with convulsions.

*Personal History.*—Born in 1892 in Italy, of peasant parentage, and came to America as an infant. Is said to have had little opportunity to go to school, but was dull when she went and was left back at least once. After leaving school she became a factory operator on collars and cuffs, making only small wages and is to be considered quantitatively inferior in make-up. Qualitatively she was seclusive, subject to the "blues" a good deal and seemed easily frightened. She drank wine occasionally with the family at meals. Seemed to get along fairly well in a general way until about the age of 19, when she began to grow more or less untidy in her habits; would stay in bed for days at a time and made no attempt to do any kind of work for eight months previous to her admission here. Her mood varied and at times she did some shouting and screaming and apparently was apprehensive of harm.

On admission to Kings Park State Hospital November 19, 1913, indifferent and apathetic, but had periods of excitement, when she would shout and scream, saying that she was "unable to control herself." Physically, neurologically negative. Mentally she was passive, apparently somewhat indifferent, but showed no very unusual reactions; seemed mildly interested in what was going on, but made no comments. Stream of mental activity; spontaneous production limited. Replies to questions were relevant and coherent; said she had been sick a long time. "All the doctors knew was

that I was afraid of pain—I was afraid of their hurting me— they didn't know what was the matter." Again said, "I always thought of holy things—I didn't seem to be like I was before—now I don't know how I feel; I don't know what is going to happen." Showed no agitation and seemed quite resigned to her various fears and phobias. General mental attitude, ideas of fear of harm befalling her, fear of passing over water, and fear of going on the street. Mood on the whole, one of mild indifference. She seems unable to grasp the true affective relationship of things. Emotional tone could hardly be said to be intact; shows certain inconsistencies, as "I suffer a great deal in my mind" (and yet shows no especial affect while saying this). Trends were not well defined or systematized; she wished to stay in bed a great deal and was afraid of things in an indefinite way; could not at first describe her feelings. Orientation for time was defective, owing to inferiority; for place and persons fair. Grasp somewhat impaired, but no great degree of deterioration could be said to exist, but there was defect in grasping events as they go along. Insight partial; efficiency impaired.

From the formal standpoint, this case presents little of interest. She gives one the impression of being simply inferior and rather stupid. On looking into the case from the standpoint of analysis, we find that as a child she soon learned that she was slow in doing things and began to feel nervous and afraid for fear of censure. She liked to stay at home better than going out and playing with others and the same has continued throughout her life. She felt much of the time as though she had the "blues" and always felt apprehensive and afraid. She is a devout Catholic and has had religious dreams since she was six years old. These dreams began before she learned to masturbate, but there always seemed to be something on her mind of a sinful nature and she feared she would lose her soul. (There is a period of childhood amnesia which could not be reached probably covering some early complex which may have been the antecedent for the masturbation habit, and the religious dreams were in reality subsequent, rather than prior, to the masturbation habit.) As she grew older, this fear of losing her soul continued and she went a great deal to confession, but did not get much good from it. Finally, when she grew old enough to work, she became so nervous that she could go to confession no longer. When she was about 16 she went to church on this account; she was suffering from "a very nervous strain;" suddenly she had what seemed to be an intense shock through her body and head. She said, "I used to go to the mis-



sion church and the man there scared me; he used to talk about such terrible things—about judgment and such things—I had my mind on religion—I thought I ought to do the will of God and go to church—I had committed all sorts of sins against God.” Also she had received some strong impression from a doctor early in life. She said she was always afraid of doctors. Said, “I was afraid of pain; I was afraid of their hurting me ( the doctors); I suffered terribly before—when I walked around the rooms; I felt so unnatural, so strange—like somebody suffers all the time and they can’t get out of it—I was afraid some one was going to harm me and I was afraid when I passed over water I would get drowned—I was afraid of fire—that if the building got burned up I thought I would get burned up too—when I was 12 years old I was frightened by a man—he took me in a dark place; he just put his arms round me; he didn’t do anything to me, but he held me tight, and when I started to scream he let me go.”

Probing concerning her fear of doctors, she said, “ when I was 9 years old the doctor made my vaccination, but he didn’t hurt me—when I got big, about 15, I got afraid of doctors—I was afraid they would hurt me, torture me, cut my arms and legs off and make me suffer (apparently elaboration of infantile ruminations over vaccination). Her mother had whipped her because she had talked and laughed with boys when she was about 14. She had had visions. She saw the Blessed Virgin, who appeared once for a moment and then vanished; “ she was dressed in blue and white and swords were in her heart (just as in the picture).”

It appears that she wished that God would forgive her because she was afraid she would die and lose her soul; because she had had bad thoughts about people and her own self (masturbation). She prayed about other things, such as to be delivered from stealing. She had practised masturbation since a child and knew it was wrong and the idea of stealing probably represented a transference of the affect to a more acceptable form of sinning than masturbation. She said she had masturbated ever since she was six years old. Concerning a dream she said, “ I saw heaven and there was a bar as if heaven were barred and the Blessed Virgin talked to me. That was before I ever did anything and I dreamed of the infant Jesus, just as if he were calling me and I had a bad conscience.”

The patient is a childish, inferior type and the wish in the latent content of the dream is apparently the same as the wish in the manifest content as in the case of a normal child. The case shows the insight that can be gained into the conflicts of even rather inferior types of patients when we find them accessible and able to co-operate.

All of the preceding cases were those in which a formal diagnosis of "psychosis allied to dementia præcox" was made. Subsequent developments have seemed to justify this diagnosis, as the patients are showing more and more difficulty in making adjustments and consequently dilapidation of personality has begun. The next few cases are those which belong to a somewhat different type of constitutional reaction.

P. A. W., No. 73253.

*Family History.*—Complete for three generations. Maternal grandfather seemed a little queer and had a bad temper. Maternal grandmother was neurotic, but lived to an old age. Father was subject to attacks of the "blues"; was a fairly efficient coal salesman and was never considered insane. One brother lacks ability for concentration and cannot seem to apply himself to anything; does not want to work.

*Personal History.*—Born in Michigan in 1879; birth was instrumental. School record average; never left back. Make-up, quantitatively, normal; qualitatively, was idealistic; never contented in her home life; quite intellectual; worried over her own faults; was not anti-social and liked company. She was inclined to fret over small things, but was an efficient housewife. She married in 1901; had one child; living, none dead. Two miscarriages without special incident.

*First Attack:* Following childbirth in the spring of 1903 she became depressed about the first of May and throughout that summer thought she was eternally damned and wished to shoot herself; finally taken to a hospital in August, 1903, where her general mentation was clear, but she feared there was little hope for her on account of her thoughts of suicide. She worried and occasionally cried about her baby. Discharged November, 1903. "Acute melancholia; recovered."

In the interval of ten years that has elapsed she was considered "nervous" and would get "worn out" and would have spells of "nervous weakness," during which she was all right mentally, but there was a good deal of lying down and she had to "push" herself to get through her work. However, she got along until November 1, 1913, when a sneak thief got into the house when she was out and took a few things. On November 2, the first night after the burglary, she did not sleep and the second night after the theft she woke up with a nightmare, crying that her husband was being murdered by a burglar, but whom the burglar looked like she did not say. She calmed down and slept, but on the following day showed

fluctuations on her moods; said she had been a drag on the family and should have been born dead. The family noticed she did not get into the spirit of Christmas (1913) very much and on January 1, 1914, she began to speak of thought difficulty and seemed preoccupied. She thought of suicide and once got hold of an old revolver and thought of having it fixed up to kill herself; later thought of going down to the ferry and jumping into the water; then rather suddenly came to the conclusion that the country would be the best place for her (away from her city home). She thereupon went to a suburb, but said she was *too near home*; did not think it was far enough away, and for this peculiar reason returned home unexpectedly about January 15 and started to do her housework. Then suddenly packed her trunk and *arranged* with her husband *to go far up the country*. The day for her departure came, but when he met her downtown to put her on the train he found her much upset and sent her to her mother's home. She said she would not go on with the trip. "I am not fit for anything; I am desperate." She was then committed.

Admitted to Kings Park State Hospital January 27, 1914. She was depressed and worried over her condition. She realized her inability to read or to hold her mind on employment; fears she will never recover; becomes easily fatigued and contemplated suicide.

On admission, physically, well developed; neurologically, negative. Mentally, general behavior was quiet and compliant; appeared depressed and her general activities were slowed down; showed a slight degree of initial lag in speaking and her voice was low. Stream of mental activity; spontaneous production reduced; answers to questions relevant and coherent; shows considerable elaboration along retrospective lines. While telling her story she showed a certain amount of tension; rocked back and forth in the chair; clasped her hands together; seemed somewhat agitated along with the depression, all of which was concentrated around a feeling of pre-cordial distress. General mental attitude is a feeling of depression and hopelessness which she attributes to a burning sensation in her chest. This causes her to feel weak and discouraged. Her trends were not at all definite. No hallucinations. Purely mental functions, such as orientation, memory, and grasp, are unimpaired. She complained of a feeling of difficulty in fixation, yet recalled all important events. No deterioration. Insight good. Judgment on the whole situation satisfactory; no dilapidation of personality. On the formal side she still shows depression, retardation, general slowing, initial lag in utterance. No bizarre acts or ideas.

Free associations bring out the following:

My father was subject to attacks of the "blues," but he never suffered from any nervous diseases otherwise. His mother was left a widow before he was born and she thinks this accounts for his melancholy disposition. "He became depressed shortly after he was married—I have read a good deal about such things. My mother is of a highly strung temperament." Her father was a

French-Canadian and perhaps not entirely normal. He had a bad temper. "My youngest brother, who is wayward, is said to resemble this maternal grandfather of French-Canadian birth." She told of her childhood experiences, in which nothing very definite came out. Said, "when I was ill before I used to play and dance and sing and do everything that I ever did, except that I used to think I was weak, and then when my little boy was born with a cleft palate I used to think *it was a punishment for me* and I would cry a good deal."

For a long time the patient showed considerable resistance, but it was finally brought out that when she was 14 years old she fell in love with a man of a certain type of physical build who brought her much candy and many flowers, and as she grew up she continued to ruminate over him constantly and set him up as her ideal. However, he was of a lower class intellectually than she desired to marry. For conventional reasons she did not marry him and eventually married her present husband. Mr. W. was of a cold disposition, quite intellectual and highly efficient in a business way, but he never made any fuss over the patient; never seemed to know whether she was around or not and she missed the endearments which the other man had given her. Her love for the first man continued to linger steadfastly in her head and it was this submerged feeling of disloyalty to Mr. W. that made her think it was a punishment put upon her when her little boy was born with a cleft palate; all of which was undoubtedly the cause of her first attack of depression a year after marriage. She evidently made a readjustment to the situation and got along pretty well with varying success and fluctuating moods until October 1, 1912, when a workman came to her house and the patient was surprised to find herself noticing him. He resembled her early lover. Amorous thoughts arose "concerning him." She began to feel physically weak and tired out almost immediately, but there had been no concrete incident at this time. This in reality was the onset of her present psychosis. During the year following this accidental resurrection of her affect complex she had attacks of physical weakness and periods of depression with increasing inability to concentrate her mind. This increased to such an extent that she could not read ordinary newspapers. Finally, apparently quite accidentally, the workman returned in

December, 1913, and evidently finding her in a responsive mood, spoke of a picture he saw of herself on the table and apparently started up a flirtation with her. She allowed him to put his arms around her and kiss her and she put her hand on his head. Later in the day she realized the situation in which she had placed herself and told him she was sorry she had done this and took the entire blame on herself. He asked her if he might write to her and she said "no," and that "she would never write to him." The workman whom she met in 1912 and again in 1913 brought to the surface the complex connected with her original lover, on account of his "sweet ways," which had evidently made a very strong impression on her in her early girlhood. Consciously the patient makes vehement defense of (her husband) Mr. W.'s moral and intellectual characteristics, but all her ruminations are occupied by the form and features and sayings of this physical ideal with whom she is in love. However, this flirtation with a workman was a thing intolerable to the patient's rather prim personality, the content of whose manifest consciousness was largely along churchly and conventional lines. The affect of the intolerable complex she subconsciously transferred to the complex of her son's health and she began to worry about him. This son is now 10 years old and was born with a cleft palate, his father being Mr. W. The weakly, deformed child was associated with the cold (subconsciously), unloved husband and it is significant that when the baby was born the patient "wished it would die, as well as herself," probably because it represented an imperfect, undesired thing which separated her all the more from her first love. She states that she would never have married the first man at any time of her life, because he was uncouth; however, it is readily seen from the incident of the workman that this wish has always been awaiting fulfilment and was speedily dramatized when given an opportunity. She says now that she feels that she is slipping away from her family and fears that they will lose track of her. She admits having had a desire to go to the country, but does not understand why she should have been so "finicky" in her choice of a location; but it would seem that all these apparently trivial incidents symbolize a *wish to get away* from her husband, for whom she does not really care. In addition to this complex, she states that she was never well understood by her

mother, but always had a great affection for her father. At any rate the conflict that the patient has been forced to contend with has been such that she has never obtained any real satisfaction out of life. Three years ago, she felt temporarily uplifted when she joined the church, but this did not last long. Evidently this inefficient effort at sublimation was ineffectual. The depression is along rather natural lines and consciously represents a mechanism of atonement (for allowing herself to fulfil her wishes in connection with several men, which she knew was not loyal to her husband, whom she respected as an intellectual man, but who did not appeal to her primitive instincts).

L. N., No. 69886.

*Family History.*—Complete for three generations. Father said to be "melancholy at times" and alcoholic. Mother mildly alcoholic, but cheerful disposition. One paternal uncle, periods of depression.

*Personal History.*—Born in New York in 1863; early childhood uneventful; make-up, quantitatively, normal; qualitatively, social type; liked to mingle with others. She was tractable, even-tempered and agreeable. Obtained a common-school education; was bright and never left back in her class. After leaving school has worked continuously as a fur operator, making about \$12.00 a week. Puberty attained without marked change of character. At 16 she had a love affair with a man with whom she was intimate, and upon his refusal to marry her she became nervous and depressed and was committed for the first time to a state hospital, where she remained for about two years. After making an apparent recovery she returned to her work, changed her religion from Protestant to Catholic, and seemed to get along pretty well for about eight years, when she was again admitted to a state hospital at the age of 25. At this time she showed depression and ruminated a great deal over her former love affair. She remained in the hospital for about a year and seemed to have made a recovery, as she took up her work and remained out for about five years, when she was re-admitted, again suffering from a depression. Said evil spirits haunted her; thought her soul was lost; voices called her names. She gradually improved and was again discharged three years following admission. She remained well for 17 years, when, after collecting for the church on a very warm day, she rather suddenly became depressed and was admitted to another state hospital, where she remained only two months and was then paroled. She seemed perfectly normal to her friends for six months and worked as well as ever at her usual wages. Nevertheless, she was exceedingly conscientious and worried a great deal if she missed going to work. Just previous to her fifth attack she took a little gin as she had dysmenorrhœa, a thing that she had quite often at her menstrual periods. Feeling a little restless she went in February, 1914, to Philadelphia to visit some friends, who were in the habit of serving beer at meals. Here

on one occasion she drank three glasses consecutively and began to worry over this. She soon began to show ideas along depressed lines, fearing that her soul was lost; heard the voices of dead persons and thought that at times she could hear God's voice talking to her, telling her to repent, etc.

On admission to Kings Park State Hospital, physically, she showed tremor of the facial muscles, tongue, and fingers; left pupil reacted rather poorly to light; knee jerks exaggerated; troubled with headaches. Mentally, her general behavior showed depression, although she answered questions in an ordinary tone of voice and appeared interested in what was going on around her. Stream of mental activity; spontaneous production reduced; replies to questions relevant and coherent; no very great tension. General attitude, characterized by ideas of depression, feeling that she had disgraced herself in the eyes of her friends by drinking three glasses of beer at one time and reproaches herself for many minor acts in the nature of sins. Especially reproaches herself for having watched two dogs copulating. She had all sorts of religious thoughts and developed states in which she seemed to be passing through obscene scenes as if "impersonating Madame X, the Blind Girl," and others. She said, "I had been reading these books and I think I had been going through those parts too deeply. I was in bed and it seemed to be a positive reality. I didn't want to open my eyes and it seemed as though I were groping about in the dark. It was just like a play and it seemed as though my friend were there and she was shocked at the way I was acting, and if it were true, I myself would certainly be shocked." Has heard the voice of a man whom she formerly knew; also heard voices of angels and others. She developed what was analogous to scenic hallucinations while lying in bed and saw all sorts of dramas enacted in front of her *in which she herself was often one of the actors*. Frequently at such times she would smell sulphur. She also thought her eyes were "pieces of glass, as if they were not natural at all" (tendency to the development of unreality syndrome). Mental organism essentially intact; no deterioration; occasionally spontaneously complains of thought difficulty. Says, "I can't understand when this comes over me. At times it is hard for me to think." Insight good; judgment on the whole situation good.

Investigation of this case along lines of free association shows that the essential factor in her life and the one over which she has constantly brooded for 34 years is this:

She had been reared as a Protestant and at the age of 16 she fell in love with a man and had sexual relations with him; he then refused to marry her. He was a Catholic and divorced and as such was excommunicated from the church, but she as a Protestant had not been deterred from wanting to marry him on account of his excommunication. However, when he refused to marry her (when she could not get her wish fulfilment) she became de-

pressed and after her recovery she herself became a Catholic. She did not consciously realize that this prevented her from ever becoming lawfully married to him (with the consent of the church). In doing this she developed a sense of atonement, an effort at making the thing right, *i. e.*, doing a form of penance for her early illicit intimacy with him by thus placing herself forever out of his reach. *She never married* and her work as a fur operator kept her life restricted. She had no general outlet for her libido, but sublimated this more or less successfully by excessive zeal in church work. This substitution was not always adequate, and she consciously developed depressions, during which the buried irritative affect complex always came to the surface. She felt that she had done something for which her soul would be lost and all her ideas were along lines of religious recompense. After the age of 30 she seemed to have found the means of almost permanent adjustment, but with the onset of the involution period and the physiological cutting off of the libido, she found that life held less prospect than ever and at once the old conflict returned. All of this being upon a subject displeasing to the personality and which has been more or less buried, the depression is consciously hung upon the trivial incident of having disgraced herself in the eyes of her friends by drinking three glasses of beer at one sitting and also for having watched two dogs copulating. (The association here to her own case is obvious.)

By this year the constant presence of this irritative complex had shown a tendency to seriously undermine the personality and she speaks of things in a way that shows she has a tendency to get out of contact with the world, *i. e.*, feeling of bodily change when her eyes were glass and *things looked different* when she felt that way. It would appear that the scenic hallucinations were vividly projected ruminations on the lines of her own wishes. When she would lie in bed and allow her fancy to roam unrestrained she would see herself in the role of a beautiful and attractive woman, who at the same time committed more or less sexual indiscretions; at the same time realizing consciously that "to conceive of herself taking part in such orgies was quite unthinkable." (She never was particularly attractive physically, and her charms were not strong enough to hold the man she loved and who later spurned her.) The auditory hallucinations were always of the voice of the



man with whom she had been intimate. Regarding her dreams, she says "I dreamed I was going on a long journey and every time I woke up I would see a different scene—it is so vague—I have been dreaming that for years—sometimes I would feel happy and sometimes I would feel sad and I would make other people the same way. I thought I was *falling* quite a distance and then I would wake and I would seem to be so frightened" (showing the affective value of the submerged complex). She would dream of knives and had a fear of being killed in that way, which she explained consciously by saying, "you hear so much about the 'Black Hand' and I have even felt as though I was trying to aid somebody to stop that." The man she was intimate with was not an Italian, but this association refers to an Italian who wished to make love to her, but she would have nothing to do with him and with whom she never had any relations. The association here seems simply incidental. She dreams of snakes. Said, "I thought I was dreaming about reptiles all about me, but it seemed as if I had power to ward them off" (here probably associated with the incident with the Italian whom she repulsed as well as including primarily the first accepted lover).

The life history of this patient upon analysis shows quite conclusively that after the unfortunate affair with the early lover her many depressions are simply reactions to her suppressed complex which she has never been able to permanently sublimate and which after many years latency developed again at the involution period. To all her reactions, however, there is a marked atonement mechanism, which rationalizes the mental situation to her conscious personality.

These cases belong essentially to the group of constitutional depressions. Upon the formal side the outlook is good for recovery. From the psycho-analytic side, the prognosis is somewhat clouded, as we have found that the essential in each was due to an irremedial situation. The disturbing affect complex cannot be entirely sublimated by the patient, but it may be robbed of the greater part of its dynamic value by thorough and vigorous ventilation. This has been done and L. N. has long since returned home seemingly entirely normal. P. A. W. is still somewhat depressed and has failed physically to some extent.

## INSANITY WITH CEREBRAL DISEASE.

By H. P. SIGHTS, M. D.

The subject I have chosen is one of great interest to me, and should be to every one whose profession demands the knowledge necessary for the relief of human suffering. Cerebral disease is so frequently accompanied with insanity and distressing symptoms that demand accurate diagnosis and certain relief. If such a service is obtainable at the beginning, many cases would be restored to sanity.

Too little attention is paid to the anatomical structures of the brain and the relations of the tissues. The frequency of mental disturbance caused by abnormal arterial circulation is of supreme importance in the diagnosis of these cases. It is an easy thing to say that the symptoms indicate insanity with cerebral disease and base one's diagnosis according to Kraepelin, but in your mind are you satisfied as to the causes and conditions that lead you to make your diagnosis? Can you say that this man has atheromatous degeneration of the arteries, arteriosclerosis, tumor, abscess, or an infection due to trauma, after analyzing the symptoms of these various diseases? To illustrate this: If we believe the cause to be atheromatous degeneration we will consider the arterial supply to the brain, showing the anatomical basis to be that of the most favorable locality, which is, from our knowledge, the circle of Willis and the three pairs of cerebral arteries, anterior, middle, and posterior. These latter arteries arise from the circle of Willis and do not anastomose, so we readily understand that the pressure is not relieved in the usual way, and if we have a clot washed from the diseased intima of the aorta, subclavian, carotid, or vertebrals and driven directly into the rapidly decreasing lumina of the cerebral arteries, the pressure becomes so great that the artery gives way and a serious hemorrhage results. Of the six cerebral arteries, the left middle cerebral artery is the most frequent location of such a disastrous condition, owing to the fact that the left carotid arises directly from the highest arch of the aorta and its course is thus almost a direct continuation of the current of blood in the aorta,

whereas the right carotid comes from the innominate which arises from the aorta at an angle. Hence clots washed from the aorta or valves of the heart pass into the left carotid more readily. We also know that, if the rupture does not occur, softening results in that area supplied by the now obliterated artery, owing to the fact that, as stated before, no anastomosis is provided for collateral circulation. So we may expect, when we find a paralysis on the right side, a pathological condition in the area described above.

To further illustrate: When an embolus from the heart or large vessels, due to the chemical changes resulting from spirochætæ of syphilis, is carried by carotids or vertebrals, these four being the great inlets to the circle of Willis, the compensation of this circle is practically complete in case the lateral arteries are occluded, but from the carotid to the vertebral or the anterior to the posterior inlet full compensation cannot be provided, owing to the smallness of the connecting arteries. From this circle six great arteries arise, three on either side of the brain called the anterior, middle, and posterior cerebrals, from which short direct vessels plunge into the brain and nourish the basal parts, ganglia, and capsule. They are in the nature of terminal arteries and anastomose but seldom. The occlusion of these arteries destroys the circulation of the area allotted to them, weakening its function. The middle cerebral is distributed to a portion of the thalamus, internal capsule, lenticular nucleus, and is commonly called the artery of cerebral hemorrhage. So we can see that thickening as well as occlusion of these arteries would produce serious results in arteriosclerosis as well as atheromata, and insanity can be produced by either, as a result of the degeneration and softening.

A distinction should be made, if possible, in epilepsy due to cerebral disease and other forms of epilepsy. The mental syndromes have a different etiological manifestation when caused by cerebral disease and have a psychic order different from other forms of epilepsy. We have also changes brought about by certain poisons circulating in the blood which act upon the fibroid elements of the various tissues, but with greatest activity upon the arterial channels, producing a fibrin deposit, thickening the walls, especially the intima, which may continue until the lumen of the vessel is completely obliterated, strangulating the associate structures. The fibrosis may originate outside the arterioles and the

parenchyma of various organs are affected. The results of such processes are readily seen and with a delicate organ like the brain the function is easily disturbed. Loomis states that general fibrosis has its origin in hereditary organic diathesis, while arteriosclerosis is certainly a disease of old age and is a fair index of the amount of wear and tear of the remaining tissues. I have noticed it as a marked family characteristic. It is also evident that lues, over-eating, intoxication, alcoholism, lead poisoning, and rheumatism favor the development of this disorder.

As cerebral symptoms have a wide range, due to faulty brain nutrition, a warning should be given to be careful in your hasty diagnosis; for the highest and most delicate brain symptoms are likely to be the first affected. To illustrate: In cases where we have hallucinations, optical illusions, enthusiastic delusions producing active imagination, we have certain areas of the brain affected. Also the opposite may be the result where other areas are affected, which result in lessened mentality, aphasia, monoplegia, clumsiness of hands, and stupor, which are the first symptoms to be observed. In advanced cases we may expect to find as a result of these diseased conditions of the brain, coma, convulsions, associated minor symptoms, vertigo, migraine, insomnia, irritability, and abnormal craving for stimulants. All these symptoms may come first in gusts and waves.

In hardening of the walls of the arteries due to the deposit of lime, the resiliency of the vessel is destroyed, its function impaired, lessening the supply of blood to the area intended for it to serve. This results in a degeneration of this area that impairs its function and lessens its activity, which in the case of the brain will disturb the mentality of the patient. In atheroma we have patches of fibrosis that completely encircle the artery and sometimes a local deposit of calcareous tissue on fibrin produces embolic masses which are washed away by the blood stream, producing occlusion at some distant point. In either case we may have complete obliteration of the artery with the result of a perverted function.

The same condition may be produced by toxins from lues, alcohol, and certain chemicals. It is not always found that cerebral hemorrhage is dependent upon these diseases. It is hardly just to leave this subject without considering insanity due to

various tumors found in the brain, as well as meningitis. The kind of tumors found are glioma, syphiloma, tubercle, sarcoma, myxoma, carcinoma, fibroma, astioma, lipoma, neuroma, and vascular tumors, including aneurysm. Of these the most common are the gumma and tubercle. However, this long list, all combined, is a very small per cent of the cause of insanity. They affect males more often than females and are about equal in frequency in all ages up to 50. In children over one-half are due to tubercles. The symptoms of tumor are as follows: The first and most prominent is a severe and continuous headache, which has exacerbations of frightful severity, vomiting between attacks, and often nausea. Optic neuritis is also a frequent and important symptom of brain tumor and indicates a mid-brain or cerebellar tumor.

Localization represents irritated and destructive processes; sudden destruction of the cortical mechanism has by hemorrhage caused immediate loss of power by bringing new elements of disturbance into the symptom field, which in turn brings into play evidence of extending destruction. For instance, in an area practically paralytic from a disease in the cortex, convulsions occur frequently, due to the irritation of the subcortical tracts. In every case it is highly important to know the clinical sequence of irritated and paralytic symptoms in order to determine the point of invasion. Progress of extension and limit of the lesion when we consider an irritant or an irregular discharging of the brain activity to be located in a given part of the cortex, the disturbance to which it gives rise spreads in widening circles to the adjoining regions which are successively upset. For instance, the invading march of Jacksonian fit can be foretold if we know its location or storm center. The beginning of convulsive movements of the arm, followed by that of the face, lower extremities and body, shows plainly that the arm center is the point of irritation, or storm center.

In considering the treatment of these diseases I would like to set a danger mark and first of all impress upon the physician who seeks to relieve his patient after diagnosing the case and believing it due to syphilis, to guard against the evil of over-medication by the recognized drug mercury whose vapor is far more dangerous than the germ of the disease. I am convinced that many a physician in his effort to eradicate syphilis from the system has sent as many to the insane hospitals as has the disease itself, and there is no doubt

that mercury plays as important a part in destroying the function of certain areas of the brain by its corroding effect upon the intima of the arteries, producing the same result as sclerosis and atheroma. The favorite location of the poisonous influence that results in pathological conditions is in the basilar area reaching upwards to the convexity of the parietal and frontal lobes, producing motor disturbances. So commonly the base of the brain is affected that Charcot considers it never exempt even when symptoms point to the convexity alone.

The pathological changes in syphilis, where the brain is involved, shows a caseous semi-transparent substance infiltrating the soft meninges, beginning in the region of the circle of Willis and extending to the optic chiasm. This substance is composed of small, round embryonic cells. Very vascular sclerotic degenerations mark the lesions later. The nerves and vessels adjoining may be injured and their sheaths may become involved, interfering with their nutrition. These changes in structure may account for the early mental symptoms. Gummata may be encountered, varying in size from a pea to a filbert. They may be solitary or in clusters, and no part of the brain is exempt.

The differential diagnosis of insanity from cerebral disease and cerebral softening or paresis, is the most difficult, as their symptoms are so nearly identical, and without the careful investigation of the physical condition and history of the patient it would be impossible to be made. In paresis we have a general disturbance in the function of all the centers of the brain; the sensory as a rule are exaggerated while the motor centers are lessened. These symptoms, together with the history of the case, will enable us to differentiate paresis from other forms of insanity. However, we may have a gumma present in the brain that may produce paralysis that becomes progressive. The treatment of these cases is unsatisfactory, after reaching the hospital. Surgical interference in tumors of the brain offers some chance for recovery.



## SOME REMARKS UPON THE METHODS AND RESULTS OF STUDY OF THE PSYCHOPATHIES OF CHILDREN. (ABSTRACT.)

By L. PIERCE CLARK, M.D.

The author as a measure of prevention of insanity and the neuroses gave a brief account of the establishment and organization of the psychopathic clinic in the New York public school system. In October, 1913, the Board of Education of New York City created an advisory council to undertake this work. The clinic is under the administrative department of ungraded classes directed by Miss Farrell. There are 200 schools of special classes for these children, composed for the most part of high-grade mentally defective children. There are some 4000 children in these classes. The department has two specially trained neurologists and alienists for full-time service, six social and field workers. The service will soon be equipped with one expert physician and one district inspector to every 40 school classes of 15 pupils each. In completion of this organization a group of alienists and neurologists act as consultants to examine the most difficult cases and advise with the parents and teachers regarding the best methods of establishing proper home and school training-treatment of such individual children. These worst-type cases report to the main clinic at the Board of Education building, where proper facilities for examining such children are provided. The types of disorders coming before the clinic for analysis are the neurasthenic states, hysterias, incipient adolescent insanities, moral delinquents, the psychoneurotics with obsessions, phobias and morbid fears, the psychic and bizarre forms of epilepsy and the borderline of mentally inferiors and morons. In each case a detailed record is made for further group-study when the material and time warrants such being made. The method and order of such examination has been detailed in the author's article, "Psychopathic Children" (*N. Y. Med. Jour.*, April 11, 1914). During the current year a small observation home school will be established, where the necessary observation period can be properly maintained for diagnosis and to



outline more extended principles of treatment. A system of so-called parental schools are being organized by the Board of Education for a prolonged training-treatment of those cases requiring same. For the eight months in which this clinic has been in operation sufficient facts have been brought out to show that the plan is not only feasible for the scientific study of such psychopathic children but that a clinic of this sort is of real practical use in any large educational system, and should be an integral part of our public schools. Such clinics naturally require trained assistants and consultants in neurology and psychiatry; the educator and the social worker are working to the one end by their special methods to unravel the mystery and methods of prevention of mental and nervous invalidism of adult life. The whole movement is in line with the modern trend of preventative medicine and aims to promote better mental hygiene in the educational and social life of any large community.

The advisory council in connection with the ungraded classes conducted by the New York Board of Education is as follows: L. Pierce Clark, M. D., Charles L. Dana, M. D., Stephen P. Duggan, Ph. D., August Hoch, M. D., Miss Eleanor H. Johnson, Mrs. Florence Kelley, Foster Kennedy, M. D., Adolf Meyer, M. D., Mrs. Wesley C. Mitchell, Frederick Peterson, M. D., James J. Putnam, M. D., Bernard Sachs, M. D., I. Strauss, M. D., and Miss Lillian D. Wald.

#### DISCUSSION.

DR. ADOLF MEYER.—We are confronted with a problem the solving of which I think will do more than any other in bringing on a preventive basis that which we so far have been trying to do only along remedial lines. The possibilities opened up by some of the classes of unusual children in the New York and Baltimore schools, as much as anything, has given me a powerful inspiration towards the extension of our work, which otherwise might sometimes appear extremely trying and discouraging. Studying the children brings us often face to face not only with mere degeneracy and hopelessness, but with definite construction problems which can be coped with in a satisfactory way, after the assets of the children are determined and the proper places in life are assigned to those of perhaps somewhat unusual assets. In the schools of New York and Baltimore and in so many communities, there is such an interest taken in these problems that I think we alienists ought to be extremely gratified.

There are in the audience two workers, who, more than any others, will help us, and have already helped us, in reaching the source of what, so far, we have too often neglected to handle in a sufficiently preventive and construction way; they are Miss Lathrop of the Children's Bureau, and Miss Farrell of the New York schools. I think it would be a very unusual opportunity if we could get a discussion of Dr. Clark's paper from these two representatives of the advance guard of the right attack on this problem at its source.

MISS LATHROP.—I think we must all feel inspired with such a paper as that which Dr. Clark has just read. To me it was very inspiring. I hope I may be pardoned if I tell you of a picture that came to my mind as I began to hear what was said, and which will illustrate my thought:

A good many years ago I was on the State Board of Illinois for a long time, and I can now see myself standing and watching a wagon drive up to the door of a rural poor-house. In the wagon was a family—a man and a woman and a number of children. The superintendent said, "There they come. I never could see why that woman married him anyway. He is lame, cross-eyed, and triffin' and ornery. Of course," he added, indulgently, "he couldn't help being cross-eyed and lame, but there ain't no call for him to be triffin' and ornery."

As I listened to the papers this morning, the great revolution in our attitude toward such a family was strongly indicated. We have come to trust the physician and surgeon to deal with physical defects and we have reached the point where the medical profession is seriously contemplating those defects for which "triffin'" and "ornery" stand as making the most important demand of all upon skill and analytical wisdom. It is this inability to keep up with the procession, the feebleness of will, the lack of resistance, which doom certain types of human beings to dependency, which, unregarded, give us one generation after another whose natural refuge is the poor-house.

This great national body is composed of men who have unquestioned authority in the study and determination of the problems of mental defect. It is most encouraging that there is increasing emphasis on these problems in connection with questions of social welfare and in popularizing such methods of mental hygiene, such methods of dealing with nervous or underdeveloped children, as will aid in lessening that burden of dependency and feebleness which, whether it is actually increasing or not, is at any rate becoming increasingly apparent to the general public.

DR. SCHLAPP.—The speakers have set forth an interesting plan, but it seems more than strange that they failed to mention an institution to which 150 various agencies send cases, namely, the Clearing House for Mental Defectives in New York City. This Clearing House was officially recognized by the Department of Charities in 1913 to do work in this very field; to examine all the mentally unfit persons in the community, and to work out a system whereby these individuals can be cared for during the rest of their lives.

To my mind, Miss Farrell makes a statement that seems rather absurd. She says: "We have cured six cases of dementia præcox this year." Diagnosis should not be made by anyone who is not thoroughly familiar with psychiatry, practically as well as theoretically. The teachers are in the schools primarily to teach normal children—not in the field to study abnormal mental states. If an institution to do this special work has been established in New York City, not only to study but to care for these individuals as well, it is only proper that the Department of Education should co-operate with this institution. It is partly under the jurisdiction of the Department of Charities, it is recognized as part of the city administration, it is a city institution. To receive help through a branch of the Charities Department is no more of a stigma than to receive help from any other free clinic or organization from whatever source.

There is another fact that I want to bring out. The community is not alone made up of school children, we are examining daily individuals who are under the six-year school limit, also receiving daily, people who are over 16 years, yet who are mentally unfit. Where are these people to go for examination, or where are they to be referred to for advice and care? This Clearing House in New York City has been established to examine and to offer help to all individuals; its activities not being confined to any one period in life, but designed to aid children under six, children from six to sixteen, and adults over sixteen. What are we going to do for the children of the parochial schools if this proposed system is established for the public schools? Can they get help from the Department of Education? Why not have an institution that is central, and that will do the work not only for the schools, but also for children who are under six years of age, or for any individual not of school age? That is what this Clearing House has been established for: to help every single person who may come to its doors for help. I believe the work of the schools is a good one, likewise the clinic, but that will not be adequate, that will not meet all conditions. Therefore, I believe it is only proper that the Board of Education should co-operate with a system of clearing houses that will protect the whole community and by being open to all children below and above school age. I believe the State of New York is about to take steps to establish such clearing houses in different parts of the state. The matter has been brought up and discussed and it has been decided, I believe, to establish clearing houses on the plan of the Clearing House in New York City and so register and examine every mentally unfit person in the community. The records of these clearing houses would be complete for every individual examined, copies of these records could be sent to the central clearing house, and a record of every mentally unfit person in the state could thus be had at the central clearing house. Such a system would greatly facilitate any follow-up system that might be adopted. In this way one could keep in touch with cases after they have passed through the public schools—right up to and through adult life. At any time, if found necessary, the city could take care of them properly. I do not think that any system of clearing houses would in any way detract from the

work of the Department of Education. We must have a complete record of all cases of mentally unfit persons, and we must have the co-operation of the Department of Education. Furthermore, I believe it is their duty to willingly grant such co-operation.

To conclude, let me summarize the work of the Clearing House thus far: We have in the Clearing House a working force of nine physicians and three psychologists; we have four social service workers, who go out and investigate conditions; we have one chief examiner and four stenographers who take down the histories as they are dictated. This clearing house is partly supported by a private fund and partly supported by the city. The private fund has placed three internes on Randall's Island, doing work for the City of New York, men who have had hospital experience and who are capable of taking up the situation in such an institution. We have since the opening of this institution, in January, 1913, examined over 4,600 cases, which shows you that this institution is doing some work and it ought to be recognized, and the ladies and gentlemen who are talking for the Board of Education, ought not so studiously avoid mentioning the Clearing House in New York City.

DR. L. PIERCE CLARK.—I thank you, ladies and gentlemen, for your discussion of this paper; it only goes to show that we are all much concerned about getting "on the job" and finding out how we can best meet the problems. It also shows that there is an abundant field of work for all, and that there is much to be done in the whole situation. I may say that there has already been two conferences in New York, looking toward the co-ordination of educations and charities, and in order to meet the issue in its broadest sense it is my hope that this shall be brought about. If it is carried out successfully I have not the slightest doubt that at a future meeting it will be possible for us to bring forward complete analyses of cases that will be of importance to the general scientific problem which we are solving to-day.



## THE PREVENTION OF SUICIDE.

By TOM A. WILLIAMS, M. B., C. M., (EDINBURGH), WASHINGTON, D. C.,  
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The safe-guarding of those in custody on account of mental unsoundness is a problem for their guardians, which will not be considered here. The problem we have to study is one of preventive medicine, and concerns thousands of suicides due to distress of mind, the result of psycho-sociological conditions, before which, to judge by their great increase, society shows a helplessness which, in view of present psychopathological knowledge, is reprehensible.

For example, to a young man or woman the object of his or her affection fails or ceases to reciprocate. Under this cross, bitter pessimism as to the future dominates the mind, and forthwith the only solution which is seen is grasped and life terminated. Or the situation may be such as that portrayed in *La Giaconda*, where jealousy complicates the situation. Or the business or professional man finds the struggle too great, and feeling he cannot endure the implicit reproaches of wife and family, or the disregard of associates, he flees. He may fly to drink, or crime; but, as we may learn from the newspapers, death is a frequent recourse.

Now, not everyone subjected to psychical traumata of this and kindred nature takes refuge in death. In the struggle of motive, the conservative features may preponderate, or may even at the last moment during attempt at suicide, reassert themselves, as in the case of Benvenuto Cellini or in that of the more modern and better analysed instance of the young Genevese lady reported by Flournoy.

### CASE I. A REMARKABLE EXAMPLE OF SELF-COMMUNION BY DREAM HALLUCINATION, PREVENTING SUICIDE.

A young married woman, much admired and petted, became acquainted with a young doctor of Geneva while at a summer resort with her mother.

His seriousness and force of character excited an admiration and respect in the spoilt child, who had always before been treated rather as a puppet than as a thinking being.

Although she was of agnostic tendencies, his firm faith, maintained without rancor, only increased her respect during their numerous discussions on philosophy and morals.

Having suffered the serious chagrin of an estrangement from her husband and the belief that she had contracted a serious disease from him, she became preoccupied by the thought of suicide, and this culminated one night before a ball after one of her children had wept on being repulsed by her on account of her fear of infecting the child.

Returning home tired after intentionally showing unusual gaiety at the ball, the horror of her lot seized her so strongly that she impulsively rushed to the wharf on the lake alongside which she lived, and bent over to look in the water, which at the moment attracted her strongly, when suddenly, from the water, rose a vivid picture of young Dr. T., looking stern, and talking in the harsh voice he had once used to her in reproof. He clasped her round the waist and by the shoulder, and led her home, all the while pointing out the enormity of her contemplated act, and showing her how her duty lay with her children.

As to what dictated Mdme. A.'s choice of the person who appeared in the hallucination, even if telepathy were proved true, an occultist explanation can be excluded here, because Dr. T. did not even know that she dreamt of destroying herself and he had no particular thought of her at the time. Moreover, for three months they had been corresponding, being led to do so without deliberate intent; and indeed at that moment Mdme. A. carried inside her corsage a letter received just before the ball, of which she had postponed the reading until a more tranquil moment. Hence an undertrain of thought of him must have run through the evening, especially as she felt that Dr. T.'s opinion about her disease and course was the most valuable she knew; he was the incarnation of prudence, reason, morality, trust in the ideal. Even her annoyance at his opinions came from her feeling of their superiority. He had taken the place of a director of her conscience. For even although, unlike a hypnotiser, he had never directly commanded or suggested her in any way, his whole relation was one huge suggestion towards courage and hope.

As in most dreams, a certain fantasticalness showed itself. Thus the doctor was dressed in Alpine costume; this was due to the preponderance of a first impression (for the first time she saw him he was thus dressed). As a matter of fact, he had never placed his arm round her waist nor caused her to kneel at his feet, nor reprimanded her directly, nor spoken to her in the second person singular, although they always spoke in French.

Although three and a half years have elapsed, no similar phenomenon has occurred to Mdme. A. At first she believed in its reality, though hardly in its miraculousness, but after a few days she suspected that it was illusory.

The evocation of Mdme. A.'s doctor friend in hallucination is comparable to the association of one's hypnotiser with the idea he has suggested. There is no need to insist upon the usefulness of Mdme. A.'s experience; it saved her life. There is no need to invoke a metaphysical explanation, dramatic as was the event; for it was merely the sudden ascendancy of motives of superior force, which had been temporarily buried in the mind, during the fixing of her attention upon her misfortune, and during the emotional upset when she repulsed her child.

Benvenuto Cellini relates a similar experience which occurred during his imprisonment by the Pope. His careful preparation for suicide was suddenly interrupted by an invisible presence, which violently threw him into the corner of his cell; whereupon the idea of self-destruction disappeared forever.

Both these experiences are of *oniric* character, and have the same psychological effect as would occur from a heart to heart conversation in which the frank avowal of our troubles dispels the morbid notions which we have tried to hide, but which nevertheless eat at the heart like a canker.

But not every one has within himself a powerful director of conscience ready to spring to the rescue when danger threatens. So these people require assistance to overcome their psychological disorder. It must be remembered that the appeals to common-sense and religious motives have failed in the persons who commit suicide; and I regret to say that there are many instances in which medical advice sought for fails to assist. This is not because medical science has not learnt to cope with such a malady, but because the doctor consulted is too seldom conversant with psycho-



pathology, and so takes refuge in a vague tradition which leads to the giving of bromides, strychnine, douches, rest-cures (the name provokes derision), advice to change scene, or suggestive or would-be cheerful reassurances based on what the physician believes to be common-sense. What is required of the physician is to realize that the patient is in need of the kind of sense which is as yet "uncommon"; and all these procedures fail in effect, because they are mere shots in the dark, not even entitled to the term empirical; for they are not based on successful experience nor on sound induction nor reasoning; they are merely imitative therapeutics applied without proper diagnosis of the patient's need, and without adequate comprehension even of the effects they produce, and entirely without reference to the process at work in the patient.

What then should be done? Simply what is done in all real medicine: (1) To understand the physiology of the perversion of function presenting itself; (2) rectify the disorder if one can.

Suicide generally denotes disturbance of an individual's power of social adjustment. For example:

- (1) Disease frankly in the body, such as cardiac distress.
- (2) Misinterpretation of reality, as in alcoholic raptus.
- (3) Emotional grief, as love-sickness, bereavement, business failure, etc.
- (4) Simply a wrong idea.

It is the last two varieties which are studied in this article. Concrete examples where suicide was prevented form the best introduction to a comprehension of the principles upon which depends prophylaxis.

## CASE II. ATTEMPTED SUICIDE; PSYCHOGENESIS, THERAPEUSIS.

A farmer's son of 22, after some weeks of moody behavior, threw himself into a creek. He was quickly rescued by his brother, who reproached him severely. This did not deter him; for a few weeks later he swallowed laudanum. This led to his removal to a sanatorium where, after a few weeks, he crushed and swallowed an electric light globe. Later, he gained access to a medicine cupboard, and again swallowed laudanum. So his friends in despair brought him to a doctor friend in Washington, who immediately asked me to see him.

Examination showed no physical disorder ; but I discovered that there existed a serious psychological situation, which no one had even suspected, much less attempted to penetrate.

The boy was so ashamed of himself, although still determined to commit suicide, that it was hard from his whispered utterances to reveal the facts from the analysis of which was furnished the very simple explanation of his distressing predicament. To state the position briefly: Upon this boy had devolved, since the death of his father, the management of his mother's farm. But a younger brother had succeeded in interfering a good deal with our patient's plans, much to his mortification; and when also neighbors' meddling was acquiesced in by his mother the situation became intolerable, as he had already failed in an attempt to work happily in another environment which he tried for over a year. So that suicide seemed the only escape.

The manner in which the psychological situation was ascertained is best judged from a transcription of the questions and answers of part of the examination:

"What is the matter?"

"Stomach troubles; if I could get well I would be alright."

"Have you any pain?"

"No."

"Why are you then complaining?"

"Because my bowels do not work."

"Why take so much laudanum?"

"Because I think I should be better off if dead." To a further question. "If I could be cured I would be content." "I could not stand being worried by my brother of 19, and my sister who is 24, and my mother. I want to go and work for myself; I should get on better." (He had forgotten to mention his sister; and when she was mentioned, he stammered.) "They pick on me; for example, if I get up too early; and I always feel I could not do the things I want to do. But when I went to California, I felt uneasy, even when working alone. I have been dissatisfied all my life. I do not know what my trouble is or what I have done different from any one else." To a further question, "I went to school."

"Have you done anything with which to reproach yourself?"

"No. I think there must be something wrong with my brain." To a further question, "The whole case is imagination."

"Why do you think so?"

"I do not know."

"Since when have you thought so?"

"Since four years ago, when neighbors would interfere with what I had done on the farm; for example, in planting the corn, people would comment upon it, and my mother would take their advice and overrule my way."

"Why do you take it so hard?"

"Because I have poor judgment."

The inquiry was then pushed with regard to his relations with the opposite sex. He declared that he had liked their society, although he did not dance and was not "immoral" as he called it; but he confessed his bashfulness and also that he thought girls were not worth spending so much money upon as was necessary; he did not think they were dependable, and he had decided not to marry because of seeing so much of married life; he had never cared for any particular girl, although he had often desired them, but had not the "face" to make advances towards what he thought to be wrong, as at school boys and girls had been separated; besides the girls laughed at his timidity. Accordingly, he told the other boys that their indecent talk was wrong; and was laughed at for his pains and made still more bashful and ashamed.

However, he had dreamed of erotic situations, which made him feel ill; and he feared it would injure his health. As a small child, his dreams had been terrifying, such as falling and being killed, or being run away with by horses; but these had not troubled him since. There had been no spontaneous diurnal emissions; but he had provoked them until he was 18, and had then ceased to do so, as other boys often teased him about it, and said that he would be impotent, as he had ruined himself; hence he was very much ashamed.

*Interpretation.*—The failure of this boy to stand up for himself was due to his own shame at the onanism he had practised and his fear that it was injuring his mentality; so that he was not able to stand up against other boys, by whom he was much teased; in consequence of which he withdrew from social life, especially where girls were concerned, and became taciturn and irritable.

He had to confess that if he could be well of what he thought incurable, viz: "a hopeless mental inferiority which masturbation

must have caused," he would be willing to live, and would like to work.

*Treatment.*—He was assured, and examples were given him to show that he was quite mistaken about the effects of onanising; and he was asked to think over until the next day the explanation I gave him concerning the genesis of his shame and timidity, meanwhile promising not to attempt suicide until he had seen me again.

The next day discussion was resumed; until in less than a week the boy could be trusted alone, not only in the hospital grounds, but in town. He went home in ten days perfectly cured, and has been at work and in good spirits ever since, now nine months ago.

The treatment was conducted in a general hospital; and the maximum of freedom was allowed the patient from the first, the greatest tact being urged upon those who nursed him.

### CASE III. LOVE SICKNESS IN A MAN.

Another case of contemplated suicide, in a young banker, was caused by a period of prolonged strain and overwork, culminating in a serious rupture of an engagement which had lasted six years. The patient was lachrymose, agitated, trembling by fits and starts; he would rush from the table suddenly with the desire to kill himself, or break into tears without provocation, especially when with his family. At his work he appeared comparatively calm, but it was only by an intense effort, which further debilitated him. He had lost forty pounds in weight. His relatives exhorted him to "buck up," "forget it," or sometimes chaffed him about it all. This only aggravated his distress, which a progressive insomnia kept augmenting.

The treatment used was to convince him of the need of distraction from his painful ruminations, and that this could be done only by hard physical work which would at the same time increase his resistance to painful memories, by removing the weak irritability of his nervous system. He was sent to the country two or three times before the right kind of place was found, and before he learned to arouse himself from the bodily lethargy and mental concentration upon his troubles. Eventually the right place was found, where wood-chopping and farm work kept his mind oc-

cupied and restored him physically. He now feels better than he has for ten years, and is again at the head of his business.

The love sickness of this patient was only one of the factors in the case, but it is frequently the outstanding feature of a nervous breakdown. It is very wrong to meet it lightly. The proper analysis of the situation should always be undertaken and the co-operation of the patient enlisted towards overcoming the troubled mental state. There is practically always some psychological fact concerning which the patient needs enlightenment.

#### CASE IV. CURE OF CHRONIC FEAR.

A lawyer, 28 years old, gradually withdrew himself from the society of friends, later denying himself to all but one. He abandoned work and began to neglect food. At night he would pace the floor for hours. He looked haunted and ashamed. He twice took steps towards suicide. There is no need to enlarge upon a picture so familiar. Suffice it to say he is cured. He was most distrustful of the possibility of cure, as he had six months previously visited specialists who had failed to benefit him. As he described it, their procedure seemed to have been somewhat crude attempts at hypnosis with suggestive assertions denying his symptoms and their cause, which he had declared to be a state of fear.

It was mainly in the presence of other people that his fear came over him; and he was much ashamed all the time because of this fear. It was quite different from the timidity of adolescence. As a small boy he was noted for his bravery, and would fight against the boys of the neighborhood.

The cause of his fear was unknown to him; and he believed it was hereditary, as one of his brothers was worse than himself and had become a wanderer whose whereabouts would be unknown for months at a time. The patient had been fighting against this fear at least since his college days; he had tried playing football to make him courageous, but without effect; and so when he graduated he plunged into a camp of rough lumber-men and took his part as a laborer with the rest. Six months of this gave him still greater admiration for courage, but in nowise improved his own. He then returned to civilization and plunged into his studies and office work, hoping to attenuate the fear which gripped him; but instead

of this he gradually lost mastery, and after six years of struggle fell into the state in which he came to me.

*Genesis.*—After a physical examination, which disclosed no important features, except great loss of weight and a high degree of erythism, psychological exploration was begun by my stating to him that either he was, as he believed, a physical degenerate or there was some psychological cause for his fear; in which latter case the discovery of that cause might lead to the finding of a means for its removal and the ending of his fear. He was then told to search his memory for fear-bearing experiences in early life, but could think of none. Then period by period running back from his college days had attention turned upon it; until the patient recollected to have been morbidly fearful at each time; until finally he declared that he had always been afraid. He was then asked what incidents of his early childhood had particularly frightened him, and at first recollected nothing. Wild animals, darkness, fire and people were each in turn presented as possible factors. But it was not until the remembrance of a near relative was recalled that the key of the situation was found. It seemed that this individual's ideal of up-bringing was the hardening process, and that the theory he held was that every boy's moral welfare required the knowledge of fear. These two objects were combined in such a procedure as throwing the lads into the water while they were unable to swim, to fish them out only when they were going down almost breathless. In winter, a favorite method was to throw the boys while asleep in the morning into a bank of snow and snowball them home to the door. Another procedure was to chase the children with a stockwhip from the front door to a tree in the distance. The result of all this was not hardening, but a breeding of chronic fear in these two lads. The patient's recollection of these performances reached back to the age of 4. But he had completely put out of his mind these incidents, and indeed failed to take into consideration his cowardice as a young boy, believing it to have originated in the high-school.

*Treatment.*—When the source of the fear was discovered, the patient declared that he did not see how this knowledge would benefit him. It was then explained to him that his fear was merely a physical habit and not an instinctive reaction.

He was told that habits can be reformed if intelligent effort is employed, but that he was in no condition to begin reformation of habit until he had slept and eaten regularly for some days. When he objected that he had long since given up narcotics, as he was worse than before taking them, he was told that I never found it necessary to give narcotics; that I should induce sleep without them, and that after this he would be less unwilling to eat.

Accordingly, treatment was begun by my visiting him in bed and hypnotising him into sleep. He slept eighteen hours, and then carried out the dinner program we had previously arranged. Hypnosis was performed three times in all, but not on consecutive nights.

In the meanwhile re-education was begun. To make a long story short, this consisted merely of a reconstruction of the fear situation of his infancy, and the pointing out of the non-necessity of the fear sequence which had occurred, and the insistence upon the possibility of reconstruction of his reactions towards himself and the world. Numerous instances of the dependence of emotion upon idea\* were given; and he was instructed concerning reconditioning the reflexes as investigated by Pawlow and Crile; and he was shown the physiological perniciousness of the fear impulse.

He struggled with the situation bravely; but I left him alone after what proved too short a period, namely, four days; and he lost courage and began to relapse, until a friend drew my attention to the situation after a week. We then resumed relations, as he felt the need of help. After four more days of re-education, the tide turned and he obtained control of his fear. He celebrated the occasion by an impressionist account of his situation, from which I extract what follows:

"I've won! I've licked him! I've driven away the beast that was driving me mad. As soon as I knew just what he was, and why he came, I poked him with my finger, and he busted. He's not gone entirely; he's crouched growling nearby, waiting to jump on me again. And occasionally he gives me a twinge, such as some men get when passing a looking glass. I laugh at it. I'm on my back no longer; I'm fighting—I'm fighting now. And my

\*"Role of Affectivity and Intellect in Traumatic Hysteria." Williams, in *Journal of Abnormal Psychology*, June, 1910.

battle's all but won. I wrote my last letter on Friday. Yesterday I had fun. I got up singing in the morning, dressed carefully and went down town. I ate my breakfast slowly, but made the waiter scurry. I roamed the streets. A week ago I slunk into a restaurant, because I was fearfully hungry, unshaven, unshorn, and unkempt, and the waiters all laughed at me, and I hurriedly gobbled my food, and crept trembling out again. I went back there yesterday and bullied the whole crowd. One of them came up grinning, and I looked him in the eye, and the grin changed to a smirk. I kept him standing waiting, while I read the menu through. And I said, 'Bring me this and this and that, and Waitah, hurry! and don't you dare to not to do so always.' Ten days ago I sneaked up to the Sherman statue, by moonlight, and looked at the statue of a soldier, longingly, and wondered how he could be. Yesterday I walked up to him laughing, and wished I could shake his hand."

*Reaction.*—It is over a year now since the above account was written and the patient is now successfully practising his profession, and is still happy, not to say buoyant. At first indeed he was so expansive that I suspected a periodic psychosis, in which my intervention was a mere coincidence; but that that is not the case seems to be shown by the gradual subsidence of the extravagant behavior which the patient at first showed. Besides, another inattention wherein no such doubt could arise. It was that of a woman of 28, whose vision was restored by removal of congenital cataract. Dr. Reid Russell of Ashville, the operator, informed me that the patient's reaction was almost maniacal in her joy at her new sensations and at her unaccustomedness to the adaptations they required. So I interpret this young lawyer's extravagance of behavior to his incapacity at first to adjust himself to the new manner of looking upon the people who surrounded him, his former ever-present dread having been displaced by a disregard almost contemptuous with a consequent effervescence of the ego disconcerting to those who previously knew him.

*Interpretation.*— This case is an instance of:

- (1) An anxiety state induced by mechanism other than that postulated as essential by some psychoanalysts.
- (2) The induction of an emotional state directly from an idea.



(3) The forgetting of the initial circumstances which induced the concept which governed the life so detrimentally.

(4) The revelation of the initial circumstances by an analysis so elementary as to be no more than a particularly intelligent anamnesis, in that it neutralized scepticisms and antagonisms and proceeded with patience.

(5) The failure of catharsis per se to alleviate the condition.

\* (6) The need of re-education, that is, psychological reconditioning, for the remaking of the mechanism.

#### THE ETIOLOGY AND PREVENTION OF SUICIDE.

But not all maladjustments lead to suicide.

(1) Some persons lack the courage to die.

(2) Some lack the practical initiative, or the power to act; are aboulie.

(3) Some believe it wicked. So not all painful and seemingly hopeless distresses bring suicide.

(4) Changes in physical states aggravate distress and diminish resistance. But all is psychological in mechanism, that is, the act is dependent on the stored impressions of memory and their associations into painful complexes, which pervert the will to live.

Even the less reflective and more automatic mechanisms are psychological in type, that is, they are modifiable (conditionable as Pawlow calls it), by appropriate stimuli.

The act of suicide, then, is psychological, a perversion of the instinctive will to life and power, by means of a conditioning of that impulse reflex into its opposite by stimuli we may call pathogenic.

It is not a matter of physical defect of brain or body at all. It is merely the unfortunate utilization of the impressionability which constitutes human superiority towards an accidental course, which happens not to make for conservation.

It is like a turning of the wheel towards the precipice in order to avoid obstacles in the road which appear insurmountable.

The Pawlow dog which cannot escape the idea of the whip shown him, manifests his terror by ceasing gastric flow.

\* The hypnosis used was merely incidental to secure sleep upon certain occasions.

The suicide who cannot escape the idea of the horror of existence manifests it by the automatic reflex of jumping through the window to escape imaginary enemies, as in alcoholic raptus, or by the more complex ratiocinations of the acutely disappointed or the chronically obsessed.

The *remedy*, where the Pawlow dog is concerned, is to recondition the perverted gastric reflex, by bringing other ideas into association with the whip. The remedy, where human beings are concerned, is just the same in principle, but of course more complex in practice; but our means of altering the associations of human beings are vastly more rich than in the case of animals, thanks to the resources of human speech and the influence it brings. They constitute psychotherapy.



## MEMORIAL NOTICES.

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### DR. GEORGE S. ADAMS.

Dr. George S. Adams, for over 20 years superintendent of the Westborough State Hospital, died at Stamford, Connecticut, on March 17, 1913, at the age of 65 years.

He was born at Norwich, Connecticut, but his parents moved to Massachusetts when he was three years of age. Both his father and elder brother enlisted in the army at the time of the Civil War, and at the age of 14 he found himself obliged to leave school and aid in the support of the family.

From that time on his education was obtained from night schools and by his own indefatigable diligence in search of knowledge, meanwhile pursuing the occupation of machinist. How wisely and thoroughly he gained his knowledge is shown by the fact that he graduated first in a class of 54 at the Hahnemann Medical College, Philadelphia, in 1876.

The next 10 years of his life were spent in general practice, and at the opening of the Westborough State Hospital in December, 1886, he entered its service as assistant physician. Five years later he succeeded to the superintendency, which position he held until his resignation in 1912.

From the beginning he felt the force of the hospital rather than asylum conception and he began to urge the establishment of a separate department for the acute cases. In 1898 the first building for such psychopathic work was erected; then the colony groups or divisions for the quiet chronic patients were conceived and established, so that when he terminated his service there was the main building for the chronic-disturbed and infirm cases, the psychopathic group of four buildings and four colonies.

Such was the work that he carried out at the hospital, but more than the material development, more than the progressive ideas of the man were his personality and human influence which permeated the hospital, making it more than a mere institution.

Taking up his work where he laid it down, I found ever recurring evidences of his vast human sympathy; his patients were more than patients, they were friends to be helped, spiritually and physically. To those in need he was ever ready to give of his strength, and he was a strong man; to give of his advice, and he was a wise counsellor; to give of his means, and he was not a man of wealth.

During the last years of his service at the hospital there was added to the inevitably increasing demands of his position the struggle with ill-health. He waged a relentless battle, fighting constantly day by day, yet knowing that he lost little by little.

He resigned the superintendency of the hospital to accept a position in a private institution, believing, as he told me in his direct, concise way, that thus with less responsibility he would have a longer time to spend with his family and prolong the fight against the disease which he knew would inevitably conquer.

Yet in spite of this in less than a year there died this physician who had wrought manfully a pioneer work in the hospital, who had been a source of inspiration to his co-workers, and a well-spring of courage and hope to his patients.

H. O. SPALDING, M. D.

## DR. HENRY S. UPSON.

Dr. Henry Swift Upson was born at Akron, Ohio, in 1859, the son of Wm. H. Upson and Julia Ford Upson.

Dr. Upson received his literary education in the public schools of Akron and the Western Reserve College, taking his degree of A. B. from this latter institution in 1880. He entered the medical department of the Columbia University, and received his degree of M. D. in 1884. After graduating he served for a time upon the staff of Roosevelt Hospital, New York. Later he went to Europe, where he pursued his medical studies, chiefly in Germany. He remained abroad two years. He returned to America in 1888 and began the practice of medicine in Cleveland, Ohio. He was made chief of the Department of Nervous Diseases in the Polyclinic of Western Reserve University and was a member of its advisory board until 1895. He was made acting professor of nervous diseases in 1893. In 1895 he was made professor of nervous diseases and occupied this chair until 1912, when he was elected senior professor. He was visiting physician for nervous diseases at Lakeside Hospital from 1890 to 1911. Dr. Upson edited the *Cleveland Journal of Medicine* for six years. He was the author of many monographs which were eagerly read by members of his profession. His best known work is "Insomnia and Nerve Strain," a little volume of only 140 pages, but filled to repletion with new and interesting thought. During the preparation of this book Dr. Upson spent considerable time at the Massillon State Hospital and it became the writer's very great privilege of learning to know quite intimately the rapid working of this man's extraordinary brain. It was Dr. Upson's great misfortune that he was not gifted with a strong body. Never in robust health, the last years of his life were spent in an exceedingly frail body. 'Tis strange indeed how oftentimes great minds are imprisoned in fragile frames.

Dr. Upson had his heart in his work, and seldom have I known greater enthusiasm in efforts for the amelioration of human suffering. His body was weak but his soul was strong and his spirit

tireless. In manners he belonged to what we are often pleased to denominate "the old school of gentlemen." A gentleman of the old school. And gentle indeed was he. Under the most trying conditions, and suffering at times intensely, yet ever the same gentle, polished, kindly man. His life was an inspiration and the infinite charm of his genial presence will always be a cherished memory.

His health had been gradually failing for several years, yet he never complained nor lost his cheery greeting. The climate of Northern Ohio seemed too severe and for the last several years he had spent the winters in Italy. He was taken seriously ill in Palermo, Sicily. He had expected to sail from that port for home, but became so ill that he reluctantly gave up this hope. He went to Rome to consult the eminent physicians of that city, but lived only two days after reaching there. The end came quietly and peacefully under the clear skies and amid the scenes afforded only by the environs of the Eternal City which he had learned to love so well. He leaves a widow but no children.

In foreign lands thy dying eyes were closed,  
The land though sunny bright yet not thy own;  
Thy pain racked body and thy limbs composed  
By strangers what thy friends had done,  
Yet o'er it all thy gracious, gentle soul  
Hath cast its solace and filled our bowl  
Of sadness, with a portion of thy content.

One short sleep past we wake eternally, and Death shall be no more.

"The death change comes.  
Death is another life. We bow our heads  
At going out, we think, and enter straight  
Another golden chamber of the kings  
Larger than this we leave and lovelier,  
And then in shadowy glimpses, disconnect.  
The story, flower-like, closes thus its leaves."

HENRY C. EYMAN, M. D.

## DR. EMMET HALL POMEROY.

Dr. Emmet Hall Pomeroy was born in Lockport, New York, in 1850 and died in New York City June, 1913, almost upon the day of the completion of his 63d year.

His early education was obtained in the public schools of his native town and later at the University of Michigan at Ann Arbor, where he graduated in medicine in 1870. He accepted at once a position at Calumet, Michigan, in connection with the Calumet and Hecla copper mine, and in 1872 was made surgeon-in-chief, a position which he held for 27 years. During this period he led a busy life as his work grew rapidly until at the time of his resignation upwards of 6000 men were upon the payrolls, who were privileged to call upon the medical staff of the mine for the care and treatment of themselves and families in case of illness or injury.

In 1894 and 1895 he visited Europe and pursued medical studies at Berlin and Vienna. In 1900 after a year of ill-health he resigned from the Calumet and Hecla service.

In 1901-02 he had charge of the Lake Geneva Sanitarium, a private institution for nervous and mental diseases at Lake Geneva, Wisconsin, and was elected a member of the American Medico-Psychological Association. Later he was appointed to medical service in the coal regions of Tennessee and Virginia but his health was not equal to the task and he resigned it, and in 1911 removed to Bradentown, Florida. Here he relinquished all general practice and confined his attention to office and consultation work. His most important work, his life-work in fact, was the thorough organization of the Calumet and Hecla Hospital, which he built and placed upon an advanced plane of efficiency both in equipment and medical service. He was a diligent student and was in thorough sympathy with modern methods of diagnosis. He passed the state examinations in Michigan, Wisconsin, Illinois, Tennessee, Virginia and Florida. He also read and spoke German and Italian. His most notable contribution



to medical literature was a paper entitled "Otitis Media in all Grave Diseases of Infancy," which had much influence upon the practice of physicians in the United States and caused many to give closer attention to the condition of the middle ear in all children's diseases. He also published a paper on "Epidemic Jaundice" as he had observed it in the Upper Peninsular of Michigan, and a "Case of Symphysiotomy" in the Boston Medical and Surgical Journal in 1897. He was not, however, a frequent writer and I have failed to secure other titles of papers.

He was warm-hearted, capable of lasting friendships, genial, kind and true-hearted. He had a pleasant personality which inspired confidence among his patients and made many friends wherever he lived. Had he become interested in mental diseases at an earlier date he would undoubtedly have made valuable contributions to the literature of psychiatry.

HENRY M. HURD, M. D.

## DR. HARRY ASHTON TOMLINSON.

Dr. Tomlinson was born in Pennsylvania July 3, 1855. His parents, George Washington Tomlinson and Sarah (McCahon) Tomlinson, were natives of the same state. The father belonged to an old Quaker family while the mother was of Scotch-Irish parents. Dr. Tomlinson's father was a loyal soldier. At the opening of the war he went to the front as a lieutenant in the 26th Penn.; was mustered out in 1863 and re-enlisted in the 99th Penn., rising to the rank of major. He participated in all of the engagements of the Army of the Potomac, and at Deep Bottom, Va., near the close of the war, was wounded, sustaining injuries which eventually caused his death. His son, Harry Ashton Tomlinson, attended school at intervals during his youth, but from the age of 16 was dependent entirely upon his own resources. While working in a general store at Bath, N. Y., for six years, he occupied his leisure time in the study of the rudimentary principles of medicine. So well did he succeed that he won a scholarship offered by the University of Pennsylvania, and in 1877 he matriculated at that institution. He graduated in medicine in 1880, and began practice at Muncie, Pa., where he remained eight years. During this time he attended a course of instruction in nervous diseases, and in June, 1889, he was the physician of the Friends Hospital for the Insane at Frankford, Pa., where he remained for three years.

In 1891 he was appointed assistant superintendent of the St. Peter State Hospital for the Insane, and in June, 1893, following the resignation of Dr. C. K. Bartlett, he became superintendent. During his 12 years at St. Peter State Hospital he inaugurated many new methods in the treatment of the insane, and the hospital rose to one of the first rank by his efforts. He recognized and practiced hospital methods and discarded the old asylum ideas. He introduced women nurses into the men's wards and equipped the building with modern appliances, and through his work he was recognized as an authority in psychiatry.

He was a tremendous worker and devoted so much time to his profession that he neglected himself.

During the year 1912 a state hospital for inebriates at Willmar, Minnesota, was instituted, and Dr. Tomlinson divided his time between the two cities, superintending his own hospital and watching the construction of the new hospital of which he became superintendent later.

He was a student, keeping up with the progress of medicine, and particularly the medicine related to the care and treatment of the insane. He wrote on various medical topics and did not hesitate to advance his views on general medical problems as he saw them among the sick who were under his care. His views on pathology were wide-spread, and although they were looked upon by some of his associates as unique they were fundamentally sound.

He was an ardent debater and speaker, a genial and wholesome companion, a man who will be missed in Minnesota.

Dr. Tomlinson was a Knight Templar Mason and a member of the Loyal Legion. He had a large membership in the medical societies, among them the American Medical Association, the American Medico-Psychological Association, the American Congress of Physicians and Surgeons, the American Neurological Association, the New York Medico-Legal Society, the Philadelphia Neurological Society, the Minnesota Academy of Medicine, the Minnesota State Medical Association, the Minnesota Valley Medical Association and of the National and State Conferences of Charities and Corrections.

Dr. Tomlinson was married in April, 1884, to Miss Mary Van-dever, of New Castle, Delaware. They were the parents of three children, of whom one daughter, Miss Nancy Tomlinson, survives.

On the 24th of February, 1913, Dr. Tomlinson had a cerebral hemorrhage which produced a complete left-sided hemiplegia. He died at his home in Willmar on May 30, 1913.

Those of us who knew Dr. Tomlinson well and those who were closely associated with him appreciated him as a man and as a progressive physician. He was a man who stimulated others to work and think, and the record that he leaves behind him as a psychiatrist and a man will be a lasting monument to his memory.

W. A. JONES, M. D.

## SILAS WEIR MITCHELL.

Silas Weir Mitchell was born in Philadelphia February 15, 1830. His father, John K. Mitchell, was a professor in The Jefferson Medical College for many years. He entered the college department of the University of Pennsylvania but left during his senior year on account of illness. He studied medicine at Jefferson Medical College, receiving the degree of Doctor of Medicine in 1850. He was always interested in scientific questions and began research work very soon after he was graduated. He was, especially in his younger life, interested in physiology, and did much work on the action of snake venom and certain vegetable poisons. He discovered several interesting facts from experimental work on the cerebellum. He discovered the laryngeal chiasm in chelonia. His great opportunity came to him during the Civil War. Early in the war he was appointed acting assistant surgeon in the United States service and most of his work was done at the Turner's Lane Hospital in Philadelphia. There he had large opportunity to study gun-shot injuries to the nervous system. He wrote several monographs based on studies made there. He, Morehouse and Keen did work together and in 1872 he published his book on "Injuries to Nerves and their Consequences." Years after his son, John K. Mitchell, studied again some 40 of the surviving patients and reported their then condition. Many things were discovered by Mitchell in his study of injuries to nerves. His most popular claim to fame is the "rest cure." Its introduction caused much adverse comment but use proved its value. Its abuse by ignorant persons later did it much harm but it has now a firm place in practical therapeutics. He was among the original students of the relation of ocular troubles to headache. He first fully described erythromelalgia. He was among the first rationally to use massage and faradic electricity. With Morris Lewis he made an elaborate research on the physiology of the knee-jerk and muscle-jerk. He was a psychoanalyst before the word was invented but did not think that repressed sexual desire was the cause of all the nervous ills that flesh is heir to.

Many honors came to Weir Mitchell. He received degrees from institutions of learning everywhere in Europe and America. He was an active member of all the really scientific medical associations in America. He ought to have been a teacher but a professorship came to him only at a time when his other work and duties made it impossible for him to accept it and he resigned after holding a chair about five minutes. He was a trustee of the University of Pennsylvania for many years and was active in every movement toward real progress. He was the founder of the nervous department of the Orthopædic Hospital and Infirmary for Nervous Diseases and was physician for many years, and consultant and manager at the time of his death. Much of the material on which was based his medical studies was seen at the infirmary. He was president of the College of Physicians of Philadelphia and to him more than to anyone else we owe the magnificent building and most valuable library.

I am incompetent to speak of him as a man of letters but can only say that his novels are far above the average of those written by men who do nothing else. He died January 4, 1914. The three great qualities of Weir Mitchell were his clearness of mental vision, his emotional sanity, and his capacity for work. He saw what he looked at as it was; emotion never ran away with him and clouded his judgment: he realized that the best rest was change of occupation. As a student he belonged to a class momentarily in eclipse; the man though overwhelmingly busy with the cases of practice yet had time to be a man of science. Medicine to him was much more than a trade, it was a much-loved mistress. For a man who never had a teaching position he influenced a large number of younger men. Not a few men who have attained distinction owe much to him because of his stimulant effect on them.

CHARLES W. BURR, M. D.

## DR. RALPH LYMAN PARSONS.

Dr. Ralph Lyman Parsons was born July 30, 1828, at Prattsburgh, Steuben County, New York, and was raised there on his father's farm. His father was a native of Massachusetts, and in remote paternal line the family was of English extraction. The doctor thus, in youth, led the frugal, healthful and industrious life of a farmer's boy. At the district school he soon showed unusual aptitude in his studies and before his 20th year he had completed both a common school and an academic course of education, and he then took the complete classical course at Amherst College, from which he graduated in 1853. He resolved to acquire a learned profession and chose medicine, rather than law, or theology. As he was working his own way in the world, he taught school in Massachusetts for a time as a financial aid to his medical studies, which he began under Drs. Herny and Timothy Childs as preceptors, and completed his full medical course and took his degree of M. D. at the New York Medical College in 1857. At this date he was offered and took the position of assistant physician at the New York Lunatic Asylum, Blackwell's Island, where he served four years. The die was thus cast for his medical future.

In 1862 he entered private practice in New York City, was visiting physician at the Demilt Dispensary, and also had a class in heart and lung diseases at the Northwestern Dispensary and served one year as assistant surgeon U. S. A. at the General Hospital on Bedlow's Island.

In 1864 he married Miss Helen L. Wait, by whom he had four children, two of whom—a son and a daughter—now survive him.

In 1865 he entered upon the great predestined work of his life as medical superintendent of the New York City Lunatic Asylum, Blackwell's Island, a most laborious and important position, which he faithfully filled for 12 continuous years. When he took charge of this institution there was an epidemic of typhus fever there and the resident physician and many of the patients had succumbed to the disease. The second year of his superintendency,

1866, was marked by a still more terrible scourge in the form of an epidemic of genuine Asiatic cholera from which many of the inmates perished, and for long weeks the endurance of the medical officers was taxed to the utmost. At the period mentioned this institution was greatly overcrowded, had attendants instead of trained nurses and an inadequate number of medical assistants, deficiencies in diet and clothing and lack of room for proper classification, all of which greatly increased the perplexities and responsibilities of the medical superintendent. In the face of all these difficulties, Dr. Parsons strove bravely to carry out the correct and enlightened views which he held as to the care and treatment of the insane. He utilized all means at his command for the occupation and diversion of the inmates. He was one of the first to construct a gymnasium for them, had a paid instructor, used Swedish movement cure and had the various maneuvers practiced in time to music. He had high-class concerts furnished by professional German musicians, and had outside parties invited to meet the patients at the dances and stereopticon shows. He advocated, but was not successful in obtaining, various sorts of workshops. He was one of the first to use the economic and useful pavilion system of building on the upper end of Blackwell's Island and one of the foremost to favor the isolation of the epileptic classes, and his patients formed the nucleus of the first epileptic hospital in these pavilions, subsequently under the management of Dr. Echeverria.

In 1877 and 1878, Dr. Parsons held the position of medical superintendent of King's County for the Insane and was then for two years in private practice in New York City.

In 1880, he bought a handsome residence with 20 acres of ground at Sing Sing, New York, and equipped it as a private sanitarium for mental diseases, and personally and successfully conducted it until called from his labors to everlasting rest. He died February 26, 1914, in his house at Ossining, N. Y., of pneumonia in the 86th year of his age. He had maintained his mental and physical activities to an unusual degree in his old age.

He was a member of the New York County and New York State Medical Societies, of the New York Academy of Medicine, of the New York Neurological Society, of the American Neurological Association, of the Society of Medical Jurisprudence, of

the American Medico-Psychological Association, and belonged for 53 years to the Masonic Order. He read before medical societies and published in medical journals numerous papers on psychiatry and medico-legal subjects. His annual reports, as medical superintendent, contained useful clinical points and historic data of interest. As a hospital executive officer, Dr. Parsons had more than average ability, was sensible and fair-minded, believed in very strict discipline, but had so little of the martinet in his makeup that he erred, if at all, on the side of leniency. With his board of managers he was firm and outspoken in the interest of his patients, and full credit is due him for any generous moral courage in this line, for then, as now, politics was not without influence in eleemosynary institutions, and subserviency often signified fewer contrarieties. One reason, at least, for Dr. Parsons' retirement from his King's County position was that medical measures he deemed necessary were not carried out for the welfare of the patients.

In a memorial notice of this kind, it does not suffice to recite the leading events of the individual's life. There is a natural demand to know the real mind and character of the man whose memory it is desired to perpetuate. Obituary estimates are delicate and difficult, for too much or too little praise is to be avoided, and truthful depiction is what is needed, bearing in mind, of course, the Latin proverb, "*De mortuis nil nisi bonum.*"

Dr. Parsons was a man of very decided traits. One chief trait was his keen sense and love of justice. In his administrative capacity in large hospitals, he took remarkably great pains to decide with judicial impartiality, personal difficulties and important questions which frequently arose. His decision once given, was unalterable. Likewise his personal bearing towards individuals, as based on a deliberately formed opinion, rarely changed. He was a constant friend and a persistent opponent. Another decided characteristic was his tenacity of purpose. In the face of great obstacles he pursued his plans with a quiet determination which was, at times, simply heroic, and if defeated in the first instance he would eventually accomplish his purpose by well-directed efforts and constant force of perseverance.

Dr. Parsons was well endowed mentally, had love and pride in learning, and outside of medicine read extensively scientific and



literary books, despite some defect of vision, due in part to astigmatism. He had an unusually good knowledge of mathematics and of some of its practical applications, as in civil engineering. He acquired a good reading use of German and French, in which he also had a certain conversational ability with his patients. He was a man of some accomplishments, played various games, was skillful at chess and the solution of problems, was a good amateur performer on the flute, and for a non-professional, had unusual familiarity with the science of music. In politics and religion he was broad-minded, and had such general acquaintance with mankind, that he was liberal in his sympathies with all classes of society. He was unassuming in manner, free and pleasant in conversation, avoided large social functions and preferred a small circle of friends. In his writings he displayed logical sequence and a good command of pure English, but he always dreaded public speaking and never did himself justice in extemporary addresses. In business, Dr. Parsons was diligent, cautious, economical and successful beyond the average of physicians in general.

It rarely falls to the lot of any being to round out a half century in any special line of human endeavor, but the subject of this memorial, for more than 50 years, strove continuously and with noteworthy results, in the trying and difficult specialty of psychiatry. Few know the patient and strenuous efforts he put forth, the official cares and responsibilities he bore and the personal dangers he encountered, for after running the gauntlet of lesser assaults, he was stabbed almost to death by a homicidal paranoiac and barely escaped entry on the long list of medical superintendents who have died at the hands of their patients.

In memorial retrospect we behold the long array of deranged patients whom this veteran alienist restored to their right minds, we consider the vast amount of mental suffering which he alleviated, and we bow our heads with respect as we give this valedictory salute to the memory of one whose life was devoted to the humane service of his fellow-beings.

THEODORE H. KELLOGG, M. D.

## DR. EDWIN WARREN KING.

Dr. Edwin Warren King died in San Francisco, California, January 11, 1914, at the age of 82. He was born at Alexander, Genesee County, New York, June 16, 1831. He came to California in 1850 and engaged in mining for a number of years. While mining he was studying medicine, and as soon as able entered the Cooper Medical College in San Francisco, graduating in March, 1863. His first practice of medicine was in the mining districts, finally moving to Ukiah, Mendocino County, in this state, in 1870, where he built up an extensive practice and became known throughout the northern end of the state.

When an appropriation was secured for the construction and erection of the Mendocino State Hospital, Dr. King was appointed on the board of directors and was actively engaged in the general supervision of its construction. When the building was completed he was selected as medical superintendent, his appointment becoming effective July 1, 1893. He was continuously in office as medical superintendent of the hospital until May 1, 1912, when he voluntarily resigned on account of the loss of his right leg.

Dr. King was a most efficient and conscientious superintendent, interested in his work at all times. He studied his patients individually and was in close touch with them all. He worked long hours and when the day's work was done he rested his mind in the study of German. A hard student of the specialty in which he was engaged, he preferred to study his cases himself rather than to rely on the reports of others. He devoted practically his entire time to the patients, leaving the business management in the hands of the steward.

The following extracts from the address delivered at his funeral by John L. McNab, a member of the board of managers of the Mendocino State Hospital and Dr. King's life-long personal friend, truly depict his character and work:

"Forty years ago on the frontier of this western civilization, he lived the life of the country physician. He long had ministered to the sick of the northern country. Before telephone or telegraph

had penetrated the hills, the sound of his horse's hoofs was known to all the people of the countryside.

"In 1893 he was made the first medical superintendent of the Mendocino State Hospital. He had always been prominent in public life, an active force in public affairs. On his appointment he threw aside the trammels of private practice, and for a few months short of 20 years remained the medical superintendent of the hospital. Throughout that time he devoted the full energies of mind and body to the study of mental diseases, and the healing of wounded minds. At his death he ranked second to none in California in his knowledge of mental weaknesses. No woman with her first born was ever more tender than he in kindly ministration to the state's unfortunates. One political regime after another came and went but his only aim, his only object, was the soothing and healing of the insane.

"His career, like the career of any man of character, was not free from contests. He fought many hard battles in his life, but all were carried to victory with that quiet insistence that conquered while it soothed. This brief and fleeting memorial would fail of its purpose, however, did it only chronicle his worldly successes.

"Many have not understood Dr. King's religious beliefs because he made no public profession, and cared little for the formalism of church services. He was a profoundly religious man and in the later years of his life, when the pressure of daily duties had been withdrawn, he dwelt much upon his profound and optimistic views of the hereafter. In one of his recent works he says: 'God is our Father. We are His children—the product of His handiwork.'

"For this friend of ours the grave bore no horrors, and immortality to him was the pleasant day dream of mankind.

"Eighty-two summers and winters had gone over his head when he lay down to sleep this sleep which knows no waking. They left him rich in knowledge, sweet of temper, tender and loving to his family, and an optimist to the last. When at 81 his leg was amputated, he reached for my hand and said, 'I have been close to the border and almost within the shadow, but I have the fight in me yet, and I will win,' and he did. He lived to write his 'day dreams' wherein he answered the scoffers of the world.

" This man's monument rests upon the silent gratitude of 800 benighted minds. In the hospital for the insane he spent the richest part of his life and his labors there will plead his cause before the Father's throne. At 60 years of age he was made the medical superintendent of the Mendocino State Hospital. At 70 he had mastered the German language that he might read in the originals the treatises of the greatest authors on mental diseases. No patient was too humble to receive his kindly ministrations, and the records of the state hospital show that Dr. King corresponded with the most distinguished alienists of his time in an effort to bring relief to many an inmate whose humble origin and unheralded name brought no promise of remembrance and no return in public recognition of the service. When on the threshold of his 80th year he laid down the burdens of public service and placed them on more youthful shoulders, he was the recipient of many testimonials from the press, from public men, and from the scores of public employees who had served under him. But the surer index of his worth was the silent tribute from within the walls where the flames that burn in the human soul had been covered by the gray ashes of forgetfulness and only a faint spark glimmered in the darkness of mentality. There a silent and awe-like grief seemed to rest, because, without knowing why, they understood that a tender physician of their wounds was gone.

" Henry M. Stanley said that ' in the jungles of darkest Africa the face of a native who could not speak the language would light up when he heard the name of Livingston. He knew not the language but he felt the subtle glow of the man's tenderness.' In the same way the benighted inmate learned to know and care for the one whom to-day we meet to bid farewell on his final journey."

F. W. HATCH, M. D.

## DR. THOMAS J. MOHER.

Dr. Thomas J. Moher, Medical Superintendent of the Hospital for the Insane, Cobourg, Ontario, died at his residence February 24, 1914.

The late Dr. Moher was a son of William Moher, Esq., ex-Reeve of Douro, and was born in that township. He was educated at Lakefield, Peterboro and Toronto University. After graduating in medicine he began practice in Peterboro. He afterwards moved to Trenton, where he carried on the duties of his profession very successfully. Returning to Peterboro he again practiced in that city for several years. During that time he was superintendent of St. Joseph's Hospital, coroner for the county, medical examiner for the C. M. B. A. and Catholic Order of Foresters. He was also elected the first president of St. Peter's Total Abstinence Society.

In 1902 he was appointed assistant superintendent of the Orillia Hospital for Feeble-Minded. After two years he was made superintendent of the Hospital for Insane in Brockville. He was sent to Cobourg Hospital for Insane as superintendent in 1910 and was there until his death.

The Doctor has written many interesting articles for the Bulletin of the Ontario Hospitals for the Insane. In June, 1908, he read a very interesting paper, "Insanity, the General Public and the General Practitioner," at the meeting of the Canadian Medical Association in Ottawa. In June, 1909, he read a paper on the "Employment of Women Nurses on the Men's Wards in a Hospital for the Insane" at the meeting of the American Medico-Psychological Association in Atlantic City.

Dr. Moher was of a peculiarly genial, friendly personality which endeared him to all with whom he came in contact and he was popular wherever he went. He was an enthusiastic curler and bowler.

His sympathy and tenderness towards his patients was unfailing and his death will be keenly felt by them.

He leaves a widow and one son.

GEORGE C. KIDD, M. D.

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